Groote Eylandt Bush Blitz

Vascular plants survey

14–25 June 2021

Submitted: 02 November 2021

D. Lewis, I. Cowie, K. Brennan, B. Wirf

Northern Territory Herbarium

Flora and Fauna Division

Department of Environment, Parks and Water Security

Northern Territory Herbarium
Flora and Fauna Division
Department of Environment, Parks and Water Security
PO Box 496
Palmerston, NT 0831 Australia

ISBN: 978-1-74350-316-4

Utricularia singeriana (Vulnerable; TPWCA) and *Stylidium osculum*, a significant range extension recorded from Groote Eylandt.

This report should be cited as:
Lewis, D., Cowie, I., Brennan, K. & Wirf, B. 2021. Groote Eylandt Bush Blitz: *Vascular plants surveyed*, 14-25 June 2021. Final Report to Department of Agriculture, Water and Environment, National Parks, Biological Sciences, Canberra. Department of Environment, Parks and Water Security, Technical Report number 25/2021, Palmerston.

This survey was sponsored and supported by the Bush Blitz Program, Australian Biological Resources Study, Canberra.

Nomenclature and taxonomy used in this report is consistent with:

The Australian Plant Name Index (APNI)

http://www.anbg.gov.au/databases/apni-about/index.html

The Australian Plant Census (APC)

http://www.anbg.gov.au/chah/apc/about-APC.html

AusMoss

http://data.rbg.vic.gov.au/cat/mosscatalogue

Contents

List of contributors

List of contributors to this report.			
Name	**Institution/affiliation**	**Qualifications/area of expertise**	**Level/form of contribution**
Ian Cowie	*NT Herbarium (DNA)*	*Vascular & non-vascular Flora, NT*	*Report author, site stratification, survey participant, plant specimen identifications*
Donna Lewis	*NT Herbarium (DNA)*	*Vascular & non-vascular Flora, NT*	*Report author (principle), site stratification, survey participant, field logistics, plant specimen identifications*
Ben Wirf	*George Brown Darwin Botanic Gardens (DBG)*	*Vascular & non-vascular Flora, NT*	*Survey participant*
Kym Brennan	*Consultant*	*Vascular & non-vascular Flora, NT*	*Survey participant, plant specimen identifications*
Nick Cuff	*NT Herbarium (DNA)*	*Vascular & non-vascular Flora, NT*	*Administration*

Abstract

The Groote Eylandt Bush Blitz survey was conducted in June 2021. The vascular plant survey included specimen collections and the site-based sampling of two standard sites. A total of 487 herbarium specimens were collected, representing 361 vascular (including species from the two standard sites) and two non-vascular taxa (*Chara* sp. and a moss (possibly *Trachyphyllum inflexum*)). Although Groote Eylandt has been extensively surveyed previously, a total of 50 taxa were recorded on the archipelago for the first time, bringing the total number of vascular plants for Groote Eylandt to 1,040. Although there were no putative new species recorded, two non-vascular taxa *Chara* sp. Bush Blitz Groote1 and Moss sp. Bush Blitz Groote1 (*T. inflexum*?) are awaiting identification from specialist taxonomists. Six taxa thought to be currently undescribed were collected, including *Centrolepis* sp. carinate (L.A.Craven & C.R.Dunlop 6668)*, Centrolepis* sp. squamose seeds (P.K.Latz 3581)*, Polycarpaea* sp. sandstone (C.R.Dunlop 4567)*, Tephrosia* sp. Muddy Bay (P.I.Forster+ PIF15313)*, Sida* sp. Groote Eylandt (C.R.Dunlop 9300 & G.J.Leach) and *Uvedalia* sp. Groote Eylandt (R.L.Specht 335).

One species listed as Vulnerable under the *Territory Parks and Wildlife Conservation Act* (TPWCA) was collected from Groote Eylandt for the first time during the survey (the bladderwort, *Utricularia singeriana*). No threatened species under the Commonwealth *Environmental Protection and Biodiversity Conservation Act* (EPBC) were recorded for the survey, however one 'Vulnerable' threatened species *Eleocharis retroflexa* has been recorded previously. Other significant flora species were collected, including three 'Near Threatened' (*Bruguiera sexangula*, *Lindsaea media* and *Stylidium osculum*) and twelve 'Data Deficient' taxa. Significant range extensions were recognised for 50 taxa largely including annual herbs and tussock grasses. The majority of these represent range extensions >100 km from similar sandstone habitats and drainage systems in east- Arnhem Land. The most significant range extensions were of more than 430km, for collections of *Stylidium osculum, Trithuria cowieana and Utricularia singeriana,* with the nearest location of all three in Nitmiluk National Park.

There were no declared weed species recorded during the survey, although seven introduced species were collected, including a number of forbs and tussock grasses: *Alysicarpus ovalifolius*, *Evolvulus nummularius*, *Trigastrotheca pentaphylla*, *Sida acuta*, *Stylosanthes viscosa*, *Bothriochloa pertusa* and *Digitaria bicornis*. Overall, Groote Eylandt is well surveyed for vascular plants, with almost 20% of the Northern Territory vascular flora represented. The condition of Groote Eylandt is good with few exotic plant species and no feral animals observed during the survey. Future survey work undertaken during optimal conditions and targeting rare habitats would most likely yield collections of additional annual species and non-vascular taxa.

1. Introduction

Groote Eylandt is the largest island located in the Gulf of Carpentaria, and the fourth largest island in Australia. It is positioned off the Arnhem Land coast, approximately 50km due east of Blue Mud Bay in the Northern Territory (NT). The island measures 50km east to west and 60km north to south, occupying 2,2851km^2, 13^{o}58'S and 136^{o}35'E. Groote Eylandt is recognised as one of 42 internationally important sites for biodiversity conservation in the NT (Harrison *et al,* 2009).

Groote Eylandt and offshore islands, particularly Winchelsea (less so Bickerton) have been relatively well surveyed. Almost 16,000 plant records have been recorded, representing over 900 species (Brennan, 2019). The earliest specimen collections from Groote Eylandt were in 1803 by Robert Brown, the botanist on Mathew Flinders expedition (Brennan, 2019; Brown,

1810; Short, 2003). As the botanist on the Australian-American expedition to Arnhem Land in 1946, R.L. Specht collected a number of plant specimens on Groote and Bickerton islands (Specht, 1958, Tindale, 1958). As part of their documentation of Aboriginal uses of plants and language on Groote Eylandt, Dulcie Levitt and later Julie Waddy collected over 470 plant specimens (Levitt, 1981; HOLTZE 2021). Plants growing in rainforest vegetation were collected intensively during 1987 and 1988 as part of the NT Rainforest Survey (Russell-Smith, 1992).

Since this time, vegetation and land resource mapping surveys have included broad field surveys to inform the 1:1 million vegetation map of the NT (Wilson *et al.* 1990), the rainforest survey of the NT (Russell-Smith, 1991), the Melaleuca survey of the NT (Brocklehurst, P. 1992; Brocklehurst, P. & Lynch, D. 2009; Brocklehurst, P. & Van Kerchof, D. 1994). Finer spatial scale mapping (1:50,000) exists for the GEMCO mining lease (Brocklehurst *et al.* 1992) which aimed to characterise the dominant species and vegetation communities and this study incorporated a flora survey component. More recent floristic survey was undertaken in 2005 as part of a broader biodiversity survey of the archipelago to support its nomination as an Indigenous Protected Area (Anindilyakwa Land Council, 2006).

A more recent vegetation survey of Groote Eylandt was conducted in 2018 to inform the 1:50,000 vegetation map of the entire archipelago and main offshore islands (unpublished). In 2019, a survey in the northern gorges and associated terrain was conducted with the Anindilyakwa Land and Sea Rangers. This region of the island had very few previous survey records, and consequently recorded eighteen species not previously known on Groote Eylandt (Brennan, 2019). In collaboration with the Anindilyakwa Land Council, a land resource survey of Groote Eylandt and the archipelago commenced in 2021. This project, which aims to map the land resources at a scale of 1:50,000 and underpin land use planning will include the collection of new vegetation and soil data. A range of outputs including map products, spatial data and a technical report are expected to be finalised by the end of 2022.

Non-vascular plants are less well known from the region, generally with records restricted to incidental collections and a small number of targeted surveys by specialists. The relatively rare and inaccessible nature of the optimal habitats for these groups has also limited the intensity of sampling.

The aim of this survey was to focus primarily on the vascular flora by accessing locations not previously sampled, particularly in the sandstone pavement habitats and drainage systems (including some wetland habitats). Other areas sampled were selected across a variety of habitat and geological types. Particular emphasis was placed on species of conservation significance. Taxa not previously recorded on Groote Eylandt were also targeted. The overall approach was to fill knowledge gaps and produce a more complete checklist for the vascular flora of Groote Eylandt in order to inform management decisions. In addition to this, the survey was fortunate to collect seed for the Australian Seed Bank Partnership projects.

2. Methods

2.1 Site selection

A site-selection stratification was undertaken as a desktop exercise using existing spatial datasets (i.e. geology, topography, satellite imagery) and generated using a Geographic Information System (GIS). The stratification was assessed in relation to existing vegetation community mapping, plot-based vegetation records and herbarium specimen data. This allowed an assessment of the adequacy and comprehensiveness of existing sampling on Groote Eylandt and initial identification of survey ‘gaps’. In order to maximise the range of

habitat types sampled and to minimise the logistic difficulties associated with site access, a suite of 'cluster sites' covering the range of habitats were selected, particularly across sandstone habitats and drainage systems on the archipelago.

The Anindilyakwa Land Council, Anindilyakwa Land and Sea Rangers and Traditional Owners guided the final selection of sampling locations, based on access and cultural sensitivities. A total of 22 'cluster site locations' (including between five and nine sites per location) were confirmed (Figure 1). To reduce time in the field searching for landing sites, the helicopter, in conjunction with Bush Blitz personnel, undertook a reconnaissance to confirm landing sites at the pre-selected 'cluster site locations'.

2.2 Survey techniques

A selective collecting methodology was employed as the best means of capturing under-sampled vascular flora in the region and to improve knowledge of species of conservation significance. At each site, botanists collected independently or in pairs depending on the variety of habitat at the 'cluster site locations'. Two to four site locations were sampled each day.

Plants were generally pressed and dried, with some small, fragile plants or parts such as flowers or fleshy fruits being preserved in Kew mixture (70% alcohol, 1% glycerol). Material from taxa of particular interest to specialists for molecular analyses were sub-sampled from the larger preserved specimen and stored in airtight plastic bags with silica gel. Specimens from lower plant groups were packaged in paper in the field. Identifications were achieved in the field where possible with the remaining specimens sorted to family or genus upon return to the Herbarium, in preparation for final identification and processing.

Specimens collected from the two Standard Sites were databased in the NT Herbarium Specimen Database (HOLTZE) and other species records databased in the NT Vegetation Site Database (NTVSD). In addition, seeds were collected as part of the Australian Seed Bank Partnerships projects, targeting mainly sandstone species using standard seed collecting methodology.

To assist in the collection of species of conservation significance, and taxonomic groups of interest, various notes were assembled for reference in the field. These included:

- a list of species of conservation significance for Groote Eylandt and offshore islands;
- a list of vascular flora for Groote Eylandt and offshore islands;
- general identification notes for the Top End flora;
- images and identification notes for significant and endemic flora to Groote Eylandt;
- checklist of vascular plants in the NT (Cowie *et al*. 2017), and
- plant specimen requests from interstate and overseas taxonomists (i.e. Eucalypts and *Corymbia, Drosera, Hibiscus*).

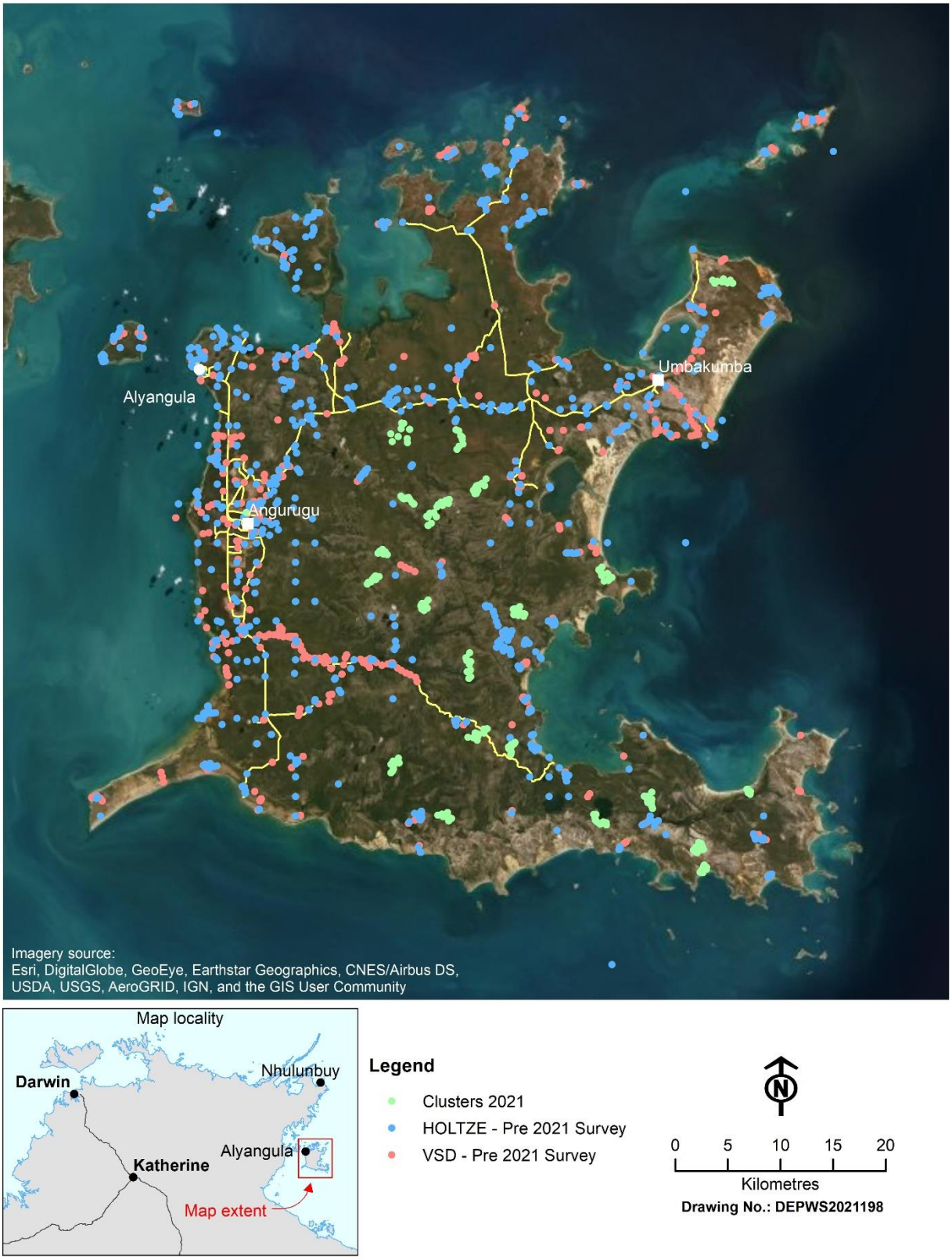


Figure 1. Distribution of proposed cluster site locations, existing vegetation plot-data and NT Herbarium specimen records on Groote Eylandt pre- Bush Blitz survey. Imagery source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

Post survey work included:

- identifying straight-forward specimens;
- sorting more difficult specimens into families and genera for identification;
- databasing specimens into the HOLTZE Specimen Database and generating labels including those for duplicates;
- specimen information is dynamically made available to the Australasian Virtual Herbarium (AVH);
- mounting specimens;
- filing specimens;
- sorting and sending duplicate specimens to appropriate institutions;
- identifying specimens for checking from the two Standard Sites;
- entering the two Standard Site data into the NTG Department of Environment, Parks and Water Security (DEPWS) corporate NT VSD;
- completing the Bush Blitz reporting requirements;
- updating the species of conservation significance in the HOLTZE conservation module, and
- Preparing images taken and uploading to the HOLTZE flora module and visible via the Flora NT website http://eflora.nt.gov.au/.

2.2.1 Methods used at standard survey sites

Detailed floristic and structural data were collected at the two Bush Blitz Standard Survey sites in accordance with the full-floristic vegetation site assessment methodology used by the NT Government (Brocklehurst *et al.* 2007) and on previous Bush Blitz expeditions (i.e. Cowie & Lewis 2012 – Fish River, Cuff *et al*., 2015 – Judburra, Lewis *et al*., 2017 – Bradshaw).

The sites were pre-selected by the Anindilyakwa Land and Sea Rangers and Traditional Owners, and final field selection by NT Herbarium staff (Figure 1). Site stratification was based upon the following criteria:

- the representativeness of the selected photo-pattern;
- the variability and diversity of the floristic associations the pre-determined 'site' represents; and
- the fire and seasonal conditions encountered in the field at the time of sampling.

The plot-based sampling method provides data to characterise a vegetation community at the NVIS sub-association level (i.e. dominant growth form, height, cover and up to five species for all layers/sub-strata (Lewis *et al.*, 2008, NVIS Technical Working Group 2017; Thackway *et al.*, 2008)). Various environmental attributes were documented, including landform, lithology, surface soil texture, disturbances, fire and ground cover using standard field proformas. Following field survey, site data were databased into the DEPWS corporate NTVSD.

2.3 Identifying the collections

Plants were identified by morphological characters with the assistance of both dichotomous and interactive keys. Where needed, identifications were checked in the NT Herbarium reference and main collections, preferably against collections determined by taxonomic specialists for the group being identified. Kym Brennan (consultant) was employed to complete the identifications for those specimens unable to be identified in the field.

Various volumes of *Flora of Australia* were used and several unpublished keys and identification notes held at the NT Herbarium. Authors of plant names follow Flora NT (2021) and Cowie *et al*. (2017).

The principal literature resources (or keys derived from these) which were used in plant identification included:

Barker, R. M. (1986). A Taxonomic Revision of Australian Acanthaceae. *J. Adelaide Bot. Gard.* **9**(1): 1-286.

Bean, A. R. (1999). A revision of *Stylidium* sect. Debilia Mildbr., S. sect. Floodia Mildbr. and S. sect. Lanata A.R.Bean (Stylidiaceaeae). *Austrobaileya* **5**(3): 427-456.

Bean, A. R. (2000). A revision of *Stylidium* subg. *Andersonia* (R.Br ex G. Don) Mildbr. (Stylidiaceae). *Austrobaileya* **5**(4): 589-649.

Bean, A. R. (2011). A taxonomic revision of *Pterocaulon* section *Monoteles* (Labill.) Kuntze (Asteraceae: Inuleae-Plucheinae). *Austrobaileya* **8**(3): 280-334.

Bean, A.R. (2015). A taxonomic revision of *Anisomeles* R. Br. (Lamiaceae). *Austrobaileya* **9**(3): 321-381.

Brooker, M.I.H. & Kleinig, D.A. (1994). *Field Guide to Eucalypts*, *Vol. 3* (Inkata Press: Melbourne)

Cowie, I. D. (2005). *Goodenia elaiosoma* I.D.Cowie (Goodeniaceae), a new species from the Top End of the Northern Territory and a key to the northern species. *Austrobaileya* **7**(1): 206-209.

Cowie, I. D. (2011). New taxa and notes on *Helicteres* L. (Malvaceae: Helicteroideae) from the Northern Territory, Australia. *The Beagle, Records of the Museums and Art Galleries of the Northern Territory* **27**: 27-54.

Cowie, I.D., Short, P.S. & Osterkamp Madsen, M., (2000). *Floodplain Flora. A Flora of the Coastal Floodplains of the Northern Territory, Australia.* Flora of Australia Supplementary Series Number 10. (Australian Biological Resources Study: Canberra).

Craven, L. A. (1996). A taxonomic revision of *Heliotropium* (Boraginaceae) in Australia. *Australian Systematic Botany* **9**(4): 521-657.

Craven, L. A., Wilson, F.D. & Fryxell, P.A. (2003). A taxonomic review of *Hibiscus* sect. *Furcaria* (Malvaceae) in Western Australia and the Northern Territory. *Australian Systematic Botany* **16**(2): 185-218.

Dunlop, C. R., Leach, G. J. & Cowie, I. D. (1995). *Flora of the Darwin Region. Vol. 2.* (Conservation Commission of the Northern Territory: Darwin). (Also published as Northern Territory Botanical Bulletin 20: 1–261.).

Duretto, M. F. (2008). A reassessment of *Boronia* (Rutaceae) in the Northern Territory with a key to species, the description of one new species and the reduction, in synonymy, of another species. *The Beagle, Records of the Museums and Art Galleries of the Northern Territory* **24**: 7-13.

Guymer, G. P. (1988). A taxonomic revision of *Brachychiton* (Sterculiaceae). *Australian Systematic Botany* **1**(3): 199-323.

Halford, D. A. (1992). Review of the genus *Oldenlandia* L. (Rubiaceae) and related genera in Australia. *Austrobaileya* **3**(4): 683-722.

Halford, D. A. (1997). Notes on Tiliaceae in Australia, 3: A revision of the genus *Triumfetta* L. *Austrobaileya* **4**(4): 495-587.

Halford, D. A. & Harris, W. K. (2012). A Taxonomic Revision of Euphorbia Section Anisophyllum Roeper (Euphorbiaceae) in Australia. *Austrobaileya* **8**(4): 441-600.

Harwood, R., & Dessein, S. (2005). Australian *Spermacoce* (Rubiaceae: Spermacoceae). I. Northern Territory. *Australian Systematic Botany* **18**(4): 297-365.

Henwood, J. H. M. (2006). A revision of Australian *Trachymene* (Apiaceae: Hydrocotyloideae). *Australian Systematic Botany* **19**(1): 11-57.

Holland, A. E. (2002). A review of *Crotalaria* L. (Fabaceae: Crotalarieae) in Australia. *Austrobaileya* **6**(2): 293.

Kerrigan, R. A. (2012). A treatment for *Polygala* of northern Australia. *Australian Systematic Botany* **25**: 83-137.

Latz, P. K. (1990). Taxonomic studies of *Fimbristylis* (Cyperaceae) in Northern Territory. *Nuytsia* **7**(2): 161-182.

Lazarides, M. (1995). The genus *Eriachne* (Eriachneae, Poaceae). *Australian Systematic Botany* **8**(3): 355-452.

Lazarides, M. (1997). A Revision of *Eragrostis* (Eragrostideae, Eleusininae, Poaceae) in Australia. *Australian Systematic Botany* **10**(1): 77-187.

Lowrie, A. (2014), Appendix. *Carnivorous Plants of Australia Magnum Opus*. Redfern Natural History Productions. Poole, Dorset, England 1355pp.

Maslin, B.R. (2001). *Wattle. Acacias of Australia.* (CSIRO Publishing: Collingwood / Australian Biological Resources Study: Canberra).

Pedley, L. (1999). *Desmodium* Desv. (Fabaceae) and related genera in Australia: a taxonomic revision. *Austrobaileyea* **5**(2): 209-262.

Puttock, C. F. (1997). A revision of *Gardenia* (Rubiaceae) from northern and north-western Australia. *Nuytsia* **11**(2): 225-262.

Sharp, P.R. (1986). *Keys to Cyperaceae, Restionaceae & Juncaceae of Queensland.* (Queensland Department of Primary Industries: Brisbane).

Short, P.S. & Cowie, I.D. (Eds) (2011). *Flora of the Darwin Region. Vol. 1.* (Department of Natural Resources, Environment, the Arts and Sport: Darwin). (Also published as Northern Territory Botanical Bulletin 37).

Simon, B.K. & Latz, P. (1994). *A Key to the Grasses of the Northern Territory, Australia.* Northern Territory Botanical Bulletin 17. (Conservation Commission of the Northern Territory: Darwin).

Taylor, P. (1989). *The Genus* Utricularia - *A taxonomic monograph.* (Her Majesty's Stationary Office: London).

Toelken, H. R. (2010). Notes on *Hibbertia* (Dilleniaceae) 5. *H. melhanioides* and *H. tomentosa* groups from tropical Australia. *Journal of the Adelaide Botanic Gardens* **23**: 1-117.

Wheeler, J.R. (ed.) (1992). *Flora of the Kimberley Region.* (Dept Conservation & Land Management: Como).

Wilson, K. L. (1991). Systematic studies in *Cyperus* section Pinnati (Cyperaceae). *Telopea* **4**(2): 361-496.

3. Results and Discussion

A total of 487 plant specimens were collected (Attachment A – Point Data) and two standard sites sampled by NT DEPWS Herbarium and George Brown Darwin Botanic Gardens staff, representing 363 taxa (Figure 2; Appendix 1; – species list). Two specimens could only be identified to genus or family including *Chara* sp. Bush Blitz Groote1 and Moss sp. Bush Blitz Groote1 and require identification by relevant experts to determine their taxonomic status.

In total, some 1,040 plant taxa (50 new as a result of this survey) are now known from Groote Eylandt and offshore Islands including Bickerton and Winchelsea. In addition, seeds were collected from 18 taxa for the Australian Seed Bank Partnership projects and now housed at the George Brown Darwin Botanic Gardens and associated herbarium specimens at DNA (Darwin Northern Australia). The 50 newly recorded species were predominantly annual herbs of damp or seasonally wet habitats.

Appendix 1 lists all vascular plant species recorded during the Bush Blitz.

Attachment 2 lists all plant specimens collected during the Bush Blitz.

3.1 Un-named or not formalised taxa

Six undescribed taxa were collected during the survey (Table 1). Although the majority are widespread across the Top End of the NT, there is one endemic to Groote Eylandt (*Sida* sp. Groote Eylandt (C.R.Dunlop 9300 & G.J.Leach)) and one is close to being formerly described (*Tephrosia* sp. Muddy Bay (P.I.Forster+ PIF15313)).

Table 1. Putatively un-named or not formalised taxa

Taxon	Comment
Centrolepis sp. carinate (L.A.Craven & C.R.Dunlop 6668)	Relatively widespread across the Top End of the NT and similar to *C. banksii*, *C.* sp. squamose seeds (P.K.Latz 3581). Commonly on sandy seepage areas and sandy, drying wetland or stream margins, often with other *Centrolepis* species.
Centrolepis sp. squamose seeds (P.K.Latz 3581)	Restricted to offshore islands of the east- Arnhem Land coast, including Groote Eylandt. Similar to *C. banksii*, *C.* sp. carinate (L.A.Craven & C.R.Dunlop 6668).
Polycarpaea sp. sandstone (C.R.Dunlop 4567)	Associated with open vegetation on sandstone in the Top End of the NT. Similar to *P. corymbosa*. Disjunct population, closest population is in western Arnhem Land and Kakadu NP.
Tephrosia sp. Muddy Bay (P.I.Forster+ PIF15313)	Common on Groote Eylandt and coastal areas in the Gulf of Carpentaria. Very similar to the inland species *T. brachyodon* var. *longifolia*. This genus is currently under revision, thus is likely to be formerly described soon.
Sida sp. Groote Eylandt (C.R.Dunlop 9300 & G.J.Leach)	Groote endemic. Very common on sandstone outcrop. Short-lived perennial herb.
Uvedalia sp. Groote Eylandt (R.L.Specht 335)	Relatively widespread across the eastern portion of the Top End. Commonly growing in moist sandy soil in a range of vegetation communities.

Figure 2. Distribution of herbarium specimens and Bush Blitz standard sites sampled on Groote Eylandt June 2021. Imagery source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

3.2 Putative new species (new to science)

No new putative species were detected during the survey. Although no immediately recognisable new taxa were identified, a number of specimens collected could not reliably be placed under an existing species name within their respective genera based on the material held in the NT Herbarium (Table 2). Where applicable, duplicates of these specimens have been distributed to relevant institutions for confirmation of identifications by specialists.

Table 2. Putative new species (new to science)

Species	Comment
Chara sp. Bush Blitz Groote1	Specialist required
Moss sp. Bush Blitz Groote1*	Specialist required

* Specimen tentatively identified as *Trachyphyllum inflexum* but requiring confirmation by specialist at CANB.

3.3 Exotic and pest species

No declared weed species were recorded from Groote Eylandt during the survey, however, seven introduced taxa were recorded (Table 3). Generally, the incidence of introduced plant species on Groote Eylandt was low. The 'cluster site locations' were selected in remote areas away from communities and development. It is likely more weed species would be detected in the vicinity of communities and other development on the archipelago. Targeted and incidental survey in more appropriate seasons would give a better indication of the location of potential 'problem' weeds.

Table 3. Exotic and pest species recorded

Exotic/pest species	Location sighted/observed	Indication of abundance	Comments
Alysicarpus ovalifolius	-13.77741, 136.66681 Ayarina Bay	Locally common on side of track adjacent to drainage system	First record for Groote Eylandt
Bothriochloa pertusa	-13.97418, 136.46095 Groote Eylandt Airport	Locally common on airstrip	First record for Groote Eylandt
Digitaria bicornis	-13.7079, 136.67195 Makbumanja Point		Fourth record for Groote Eylandt
Evolvulus nummularius	-13.97418, 136.46095 Groote Eylandt Airport	Locally common on airstrip	First record for Groote Eylandt
Sida acuta	-13.97427, 136.46107 Groote Eylandt Airport	Locally common on airstrip	Numerous records
Stylosanthes viscosa	-13.97427, 136.46107 Groote Eylandt Airport	Locally common on airstrip	First record for Groote Eylandt
Trigastrotheca pentaphylla	-13.97418, 136.46095 Groote Eylandt Airport	Locally common on airstrip	First record for Groote Eylandt

3.4 Threatened species (including significant species)

No threatened species listed under Commonwealth legislation (*Environmental Protection and Biodiversity Conservation Act* (EPBC)) were recorded during the survey. There was one 'Vulnerable' species (*Utricularia singeriana*), listed under Territory legislation (*Territory Parks and Wildlife Conservation Act* (TPWCA)), collected as part of the survey. Sixteen species of conservation significance were collected, including three assessed as 'Near Threatened' and 12 'Data Deficient' under TPWCA (Table 4).

In the NT, species have been assessed under the IUCN (IUCN, 2001) criteria according to threat. The following categories are used: 'Extinct in the Wild' (EW), 'Critically Endangered' (CR), 'Endangered' (E), 'Vulnerable' (V), 'Near Threatened' (NT), 'Data Deficient' (DD) or 'Least Concern' (LC). Species assessed as CR, E and V are considered 'threatened'. The following non-threatened categories i.e. regarded a species of conservation significance include NT, DD or Not Evaluated (NE) under TPWCA.

For the complete listing of TPWCA listed threatened species go to https://nt.gov.au/environment/native-plants/threatened-plants. For information on the flora of the NT (including threatened species), see the Flora NT website.

Table 4. Threatened species

Species	Listing status and level (Commonwealth EBPC, Territory TPWCA)	Location sighted/observed	Indication of abundance
Utricularia singeriana	Vulnerable (TPWC Act)	-14.14999, 136.46423 Salt Creek, seepage area	First record for Groote Eylandt. Large range extension with known records from Darwin rural area, Litchfield, Nitmiluk and Kakadu National Parks. Low abundance, approximately 50 individuals observed in a small area. *Pandanus spirals* over *Ischaemum australe*, in 2 cm of water.
Significant species			
Bruguiera sexangula	Near Threatened (TPWC Act)	-14.08258, 136.43201 Emerald River	3-4 trees in Standard Site 2. Only known to occur in NE Arnhem Land and on Groote Eylandt. Also in Qld.
Lindsaea media	Near Threatened (TPWC Act)	-13.9486, 136.54128 Mamarringarrimanja Swamp	Small fern 0.15m. In heavy shade on steep bank of creek channel beneath *Xanthostemon umbrosus.*

			In the NT all specimens are from NE Arnhem Land, and now Groote Eylandt.
Stylidium osculum	Near Threatened (TPWC Act)	-13.98272, 136.61052 Central Hill	First record for Groote Eylandt. Large range extension with known records from Nitmiluk NP and Edith Falls area. In wet sand amongst dense grasses along a drying seasonal stream on sandstone.
Centrolepis sp. carinate (L.A.Craven & C.R.Dunlop 6668)	Data Deficient (TPWC Act)	-13.95942, 136.63222 Central Hill and Minyara Creek	Second record for Groote Eylandt. First record was in 2019 as part of the eastern gorges survey (Brennan, 2019). Annual herb to 4cm, glabrous, whole plant red when mature. *Melaleuca acacioides* and *M. viridiflora* over annual tussock grasses and sedges. Sandy soil, minor stream channel.
Centrolepis sp. squamose seeds (P.K.Latz 3581)	Data Deficient (TPWC Act)	-14.22466, 136.70345 Murrukwulya Creek	First record for Groote Eylandt. Annual, glabrous herb to 0.05m. *Melaleuca viridiflora* and *M. cajuputi* over mixed herbs and *Dapsilanthes* sp. Sandy seepage area.
Coelachne pulchella	Data Deficient (TPWC Act)	-13.98272, 136.61052 Central Hill	Fourth collection for Groote Eylandt. Semi-aquatic annual grass, +/- decumbent. On saturated sand and margin of small stream through sandstone.
Drosera finlaysoniana	Data Deficient (TPWC Act)	-14.23004, 136.81491 Amungkwalya Beach	First collection for Groote Eylandt. Annual, insectivorous herb to 15cm, pink flowers. *Melaleuca cajuputi* woodland over *Dapsilanthus, Eriocaulon*, annual herbs; drying margin wetland margin, on sand.
Drosera nana	Data Deficient (TPWC Act)	-13.9825, 136.61121 Central Hill	First record for Groote Eylandt. Tiny annual, sticky linear foliage, small white flowers. On sand sheet on sandstone pavement.
Lindernia tectanthera	Data Deficient (TPWC Act)	-13.94814, 136.69449 Minyara Creek	First record for Groote Eylandt. Weak-stemmed annual 0.3m, flowers purple. On sandy ground, herb field adjacent to small creek. *Melaleuca acaioides*, *M. cajuputi*.

Nymphoides exiliflora	Data Deficient (TPWC Act)	-13.94819, 136.69389 Minyara Creek	First record for Groote Eylandt. Annual herb in damp soil on edge of stream, flowers yellow, fringed x4-5 petals, leaves entire. *Melaleuca acacioides* and *M. viridiflora* over annual tussock grasses and sedges. Sandy soil, minor stream channel.
Oldenlandia mitrasacmoides subsp. *nigricans*	Data Deficient (TPWC Act)	-13.9441, 136.53719 Mamarringarrimanja Swamp	Third record for Groote Eylandt. Sparse tufted annual 0.4m, flowers white, tube about 3mm long. In *Eucalyptus tetrodonta* open forest on sandy gravelly soil.
Polymeria pusilla	Data Deficient (TPWC Act)	-13.70819, 136.67181 Makbumanja Point	Third record for Groote Eylandt. Prostrate herb, rooting at the nodes. Damp soil adjacent to minor stream channel.
Stylidium tenerum	Data Deficient (TPWC Act)	-13.94819, 136.69389 Minyara Creek	First record for Groote Eylandt. Annual herb to 3cm, white flowers, basal rosette, 2 lower lobes, 2 upper lobes smaller with pink spot. *Melaleuca acacioides* and *M. viridiflora* over annual tussock grasses and sedges. Sandy soil, minor stream channel.
Trachymene tenuifolia	Data Deficient (TPWC Act)	-13.98033, 136.61038 Central Hill	First record for Groote Eylandt. Annual herb 0.5m, flowers white. Amongst boulders on sandstone pavement.
Trithuria cowieana	Data Deficient (TPWC Act)	-14.23004, 136.81491 Amungkwalya Beach	First record for Groote Eylandt. Inconspicuous herb, mixed collection with *Trithuria lanterna*. Wetland margin (drying), on sand. A large range extension with known records from Nitmiluk NP, Kakadu NP and other places.

3.5 Range extensions

Fifty species were recorded for the first time on Groote Eylandt as part of this Bush Blitz survey. All of these are considered range extensions where six species were >70km mainly from east- Arnhem Land and offshore islands; 30 species >100km from broadly east- Arnhem Land, and in some cases the Gulf; nine >200km from Arnhem Land and the Gulf; and four >400km from the Katherine region. Range extensions are listed in Table 5. Figure 3 illustrates some of the 50 species photographed on Groote Eylandt. Photo Credits by Kym Brennan.

Table 5. Range extensions or significant infill in distribution records for species

Species	Location sighted/observed	Distance from nearest known record (km)	Comments
Allopterigeron filifolius Figure 3a	-14.03193, 136.56042 Enungwadena Crossing	150km (Limmen NP)	Annual tussock grass, relatively widespread across the Top End, also on Cape York.
Alysicarpus ovalifolius	-13.77741, 136.66681 Ayarina Bay	80km (east- Arnhem Land coast)	Introduced herb
Ammannia triflora Figure 3b	-14.21113, 136.85506 Marngkala Creek	150km (Caledon Bay, east-Arnhem Land)	2 collections. Annual herb, restricted to east Arnhem land and the Gulf of Carpentaria in coastal situations.
Bothriochloa pertusa	-13.97418, 136.46095 Groote Eylandt Airport	160km (south/central Arnhem Land)	Introduced tussock grass
Burmannia juncea Figure 3c	-14.02945, 136.55424 Enungwadena Crossing	180km (east- Arnhem Land)	4 collections. Questionable whether it has been detected on Groote previously and misidentified. Widespread across the Top End, also in WA and QLD. Growing in swampy or seasonally inundated ground or beside streams.
Centrolepis sp. squamose seeds (P.K.Latz 3581)	-13.95942, 136.63222 Central Hill and Minyara Creek	180km (Vanderlin Island near Borroloola)	2 collections. Annual herb, sparse across the Top End.
Cheilanthes caudata	-14.15033, 136.46417 Salt Creek	80km (east-Arnhem Land offshore island)	Fern, relatively widespread across the Top End, northern

			Australia (WA, NT, Qld) and perhaps New Caledonia.
Cordia dichotoma Figure 3d	-14.00862, 136.75459 Bluff Hill	90km (east- Arnhem Land)	Widespread across the Top End.
Dimeria chloridiformis Figure 3e	-14.03159, 136.56032 Enungwadena Crossing	140km (east- Arnhem Land)	Perennial tussock grass, patchy distribution across the Top End.
Drosera aquatica Figure 3f	-14.1488, 136.46664 Castle Rock	210km (Central Arnhem Land)	Annual insectivorous herb, scattered distribution across the Top End.
Drosera banksia Figure 3g	-13.95942, 136.63222 Central Hill, Castle Rock, Enungwadena Crossing	160km (east- Arnhem Land)	3 collections. Annual insectivorous herb. In the NT a Top End species recorded from Humpty Doo to Elcho Island in the east and as far south as Elsey NP.
Drosera finlaysoniana	-14.23004, 136.81491 Amungkwalya Beach	200km (Limmen NP)	First collection for Groote Eylandt. Annual, insectivorous herb to 15cm, pink flowers. *Melaleuca cajuputi* woodland over *Dapsilanthus, Eriocaulon*, annual herbs; drying margin wetland margin, on sand.
Drosera nana	-13.9825, 136.61121 Central Hill	150km (Limmen NP)	Annual insectivorous herb
Drosera serpens	-13.94816, 136.69447 Minyara Creek, Castle Rock, Enungwadena Crossing, Amungkwalya Beach, Murrukwulya Creek	200km (central Arnhem Land)	6 collections. Annual insectivorous herb. Widespread in the Top End and very common on Groote Eylandt.
Eleocharis rivalis Figure 3h	-13.98272, 136.61052 Central Hill	190km (Vanderlin Island near Borroloola)	Annual or perennial sedge. Relatively widespread in northern NT (Top End, Gulf and Victoria River regions) and in the Kimberley region of WA.

Eriocaulon odontospermum Figure 3i	-13.7079, 136.67195 Salt Creek, Makbumanja Point	100km (Cape Shield, east- Arnhem Land)	2 collections. Annual herb. Common in the west Kimberley region, WA, and with scattered occurrences in NT and Qld. In NT found in the Victoria River region, south of Darwin and Arnhem Land.
Evolvulus nummularius	-13.97418, 136.46095 Groote Eylandt Airport	230km (Borroloola)	Introduced prostrate herb
Fimbristylis rara	-14.21076, 136.85616 Marngkala Creek	100km (east- Arnhem Land)	Annual or short-lived perennial sedge. Occurs in the Kimberley region of WA, widespread Top End of NT and Qld.
Fimbristylis stenostachya	-14.21468, 136.86095 Marngkala Creek	130km (east- Arnhem Land)	Annual sedge, sparse across the Top End NT. In association with *F. rara*.
Goodenia hispida	-14.02888, 136.54915 Enungwadena Crossing	190km (Nhulunbuy)	Annual herb. Widespread across the Top End, NT.
Goodenia neglecta Figure 3j	-14.22466, 136.70345 Murrukwulya Creek	260km (Ramingining, east- Arnhem Land)	Annual herb. Found in the western Top End between Oenpelli and Darwin.
Heterachne gulliveri var. *gulliveri* Figure 3k	-13.94836, 136.69379 Minyara Creek	120km (east- Arnhem Land)	Annual tussock grass. Arnhem Land and Gulf of NT.
Lindernia alsinoides Figure 3l	-13.98033, 136.61038 Central Hill	170km (east- Arnhem Land)	2 collections. Annual herb. Restricted to east- Arnhem Land, NT.
Lindernia tectanthera Figure 3m	-13.94814, 136.69449 Minyara Creek	160km (east- Arnhem Land)	Annual herb. Distribution patchy across the Top End, NT.
Lindsaea media	-13.9486, 136.54128 Mamarringarrimanja Swamp	190km (Nhulunbuy, east- Arnhem Land)	Fern. New Guinea and Australia (NT, Qld). In the NT all specimens are from NE Arnhem Land.

Mitrasacme ambigua Figure 3n	-14.01153, 136.64647 Central Hill	210km (east- Arnhem Land)	2 collections. Annual herb. Widespread across Top End, NT. Occurs from Packhorse Range, WA, to Cooktown, Qld.
Nervilia holochila Figure 3o	-14.00748, 136.75487 Bluff Hill	150km (Nhulunbuy, east- Arnhem Land)	Ground orchid. Scattered across Top End, NT.
Nymphoides exiliflora Figure 3p	-13.94819,136.69389 Minyara Creek	200km (east- Arnhem Land)	Semi-aquatic. In NT known from the Mann River area and from the Goyder River region, east-Arnhem Land).
Operculina brownii Figure 3q	-13.70406, 136.67934 Makbumanja Point	100km (east- Arnhem Land coast)	Annual or perennial twinner. Occurs across WA, NT, QLD, usually associated with coastal areas.
Phragmites karka Figure 3r	-14.0063, 136.75594 Bluff Hill	170km (Nhulunbuy, east- Arnhem Land)	Perennial robust reed. In NT localities include Arafura Swamp, Daly River, Kathleen Falls (Flora River Reserve), Liverpool River, Roper River, Peron Island and Vanderlin Island.
Phyllanthus urinaria	-13.7079, 136.67195 Makbumanja Point	90km (east- Arnhem Land)	Annual herb. Common on floodplains of the Top End, extending from Fitzmaurice River to Arafura Swamp.
Polygala longifolia Figure 3s	-13.9073, 136.6451 Central Hill	130km (east- Arnhem Land)	Annual herb. Australia (NT, QLD, WA), South-east Asia and Malesia. This species is very widely distributed across NT, QLD and WA, generally north of 19oS.
Salomonia ciliata Figure 3t	-14.03193, 136.56042 Enungwadena Crossing	230km (east- Arnhem Land)	Annual herb. Relatively common across Top End in drainage depressions, on seasonally waterlogged soils.

Spermacoce dolichosperma	-13.77741, 136.66681 Ayarina Bay	120km (east- Arnhem Land)	Annual herb. Widespread in the NT between Katherine to the north and the Murchison Ranges to the south, occasionally found further north than Katherine.
Stylidium floodii Figure 3u	-14.22466, 136.70345 Murrukwulya Creek, Minyara Creek	120km (east- Arnhem Land)	2 collections. Annual herb. Top End, NT. Similar to *S. adenophorum*.
Stylidium floribundum Figure 3v	-14.00737, 136.75545 Bluff Hill, Marngkala Creek	100km (east- Arnhem Land)	2 collections. Annual herb. Scattered across Top End, NT.
Stylidium osculum Figure 3w	-13.98033, 136.61038 Central Hill	440km (Edith Falls area, Katherine)	3 collections. Annual herb. Near threatened (TPWCA). Significant range extension, only known from Edith Falls area near Katherine.
Stylidium rotundifolium Figure 3x	-13.9825, 136.61121 Central Hill	120km (east- Arnhem Land)	Annual herb. Scattered distribution across Top End, NT.
Stylidium tenerum Figure 3y	-13.94819, 136.69389 Minyara Creek	240km (east- Arnhem Land)	Annual herb. Distribution is low across east- Arnhem Land and offshore islands, NT.
Stylosanthes viscosa	-13.97427136.46107 Groote Eylandt Airport	190km (Nhulunbuy)	Introduced herb
Tecticornia indica subsp. *Indica* Figure 3z	-14.23074, 136.81577 Amungkwalya Beach	80km (east- Arnhem Land coast)	Samphire shrub. In the NT, records from east- Arnhem Land and the Gulf of Carpentaria.
Thaumastochloa brassii Figure 3aa	-14.03193, 136.56042 Enungwadena Crossing	130km (Gulf of Carpentaria)	Annual tussock grass. Majority of NT records in the Gulf of Carpentaria and Katherine.
Trachymene tenuifolia Figure 3bb	-13.98033, 136.61038 Central Hill	180km (Nhulunbuy, east- Arnhem Land)	2 collections. Annual herb. In the NT, only known from east- Arnhem Land and Groote Eylandt.
Trigastrotheca pentaphylla	-13.97418136.46095 Groote Eylandt Airport	210km (Ngukurr)	Introduced herb

Trithuria cowieana	-14.23004, 136.81491 Amungkwalya Beach	440km (Nitmiluk National Park, Northern Marrawal Plateau)	Annual herb. Large range extension. Few records in Darwin region, Kakadu and Nitmiluk NP in the NT.
Utricularia aurea Figure 3cc	-14.2244, 136.71193 Murrukwulya Creek	170km (east- Arnhem Land)	Annual insectivorous herb. A widespread species, in the Top End, extends south to Gregory NP on floodplains and swamps.
Utricularia gibba Figure 3dd	-14.14992, 136.46428 Salt Creek	180km (Limmen NP)	Annual or perennial, affixed or floating aquatic insectivorous herb. Widespread in northern NT, extending south to Keep River and Wollogorang.
Utricularia singeriana Figure 3ee	-14.14999, 136.46423 Salt Creek	430km (Kakadu NP)	Annual insectivorous herb, Vulnerable (TPWCA). Endemic to NT where known from Nitmiluk NP and Darwin rural area along the margins of drainage flats.
Xerochloa imberbis Figure 3ff	-14.23074, 136.81577 Amungkwalya Beach Marngkala Beach	70km (east- Arnhem Land coast)	2 collections. Perennial tussock grass. Widespread in northern NT on the landward edge of saline coastal mud flats.
Xyris pusilla	-14.03128, 136.56044 Enungwadena Crossing	240km (Limmen NP)	2 collections. Annual herb. Scattered distribution in Limmen, Litchfield, Kakadu and Nitmiluk NP.

a. *Allopterigeron filifolius*

b. *Ammannia triflora*

c. *Burmannia juncea*

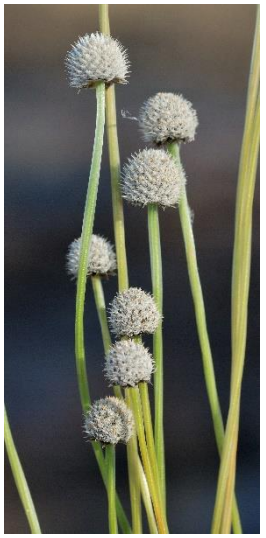
d. *Cordia dichotoma*

e. *Dimeria chloridiformis*

f. *Drosera aquatica*

g. *Drosera banksia*

h. *Eleocharis rivalis*



i. *Eriocaulon odontospermum*

j. *Goodenia neglecta*

k. *Heterachne gulliveri* var. *gulliveri*

l. *Lindernia alsinoides*

m. *Lindernia tectanthera*

n. *Mitrasacme ambigua*

o. *Nervilia holochila*

p. *Nymphoides exiliflora*

q. *Operculina brownii*

r. *Phragmites karka*

s. *Polygala longifolia*

t. *Salomonia ciliata*

u. *Stylidium floodii*

v. *Stylidium floribundum*

w. *Stylidium osculum*

x. *Stylidium rotundifolium*

y. *Stylidium tenerum*

z. *Tecticornia indica* subsp. *Indica*

aa. *Thaumastochloa brassii*

bb. *Trachymene tenuifolia*

cc. *Utricularia aurea*

dd. *Utricularia gibba*

ee. *Utricularia singeriana*

ff. *Xerochloa imberbis*

Figure 3. Images of range extension species collected from Groote Eylandt. Photo Credits by Kym Brennan.

3.6 Genetic information

DNA samples were taken from a total 290 herbarium specimens that were collected in the field. The samples were taken from the herbarium specimens at the end of each day and a record kept of those taxa that had been sampled to avoid duplication of exemplar species. Each sample was stored in a plastic zip lock bag with Si Gel, and labelled with a green slip including collector initials and corresponding collector number.

Due to time restrictions in the field, DNA samples were not taken for the last five days of the field survey. Thus, following identification back in the Herbarium, a further 129 specimens were destructively sampled to ensure every species recorded on Groote Eylandt had a representative DNA sample. The specimens in HOLTZE were updated to flag 'DNA Studies' in the voucher field and an additional label for the DNA samples were printed.

In total 409 specimens of the 487 herbarium specimen collections have a DNA sample stored in Si Gel at the NT Herbarium in Darwin.

4. Information on species lists

The NT Herbarium's HOLTZE Specimen Database was used to compile the accessions list that accompanies this report for specimen records (Attachment A). From the same list, a unique species list was generated (Appendix 1). The specimen records and species lists are relatively up-to-date in terms of taxonomy and nomenclature and are largely consistent with the Australian Plant Census.

Attachment A incorporates a field 'collection comments' which identifies the type of sample as follows:

Sheet: mounted herbarium sheet.

DNA sample: Accession (herbarium specimen) has an accompanying DNA sample in Si Gel.

Alcohol: specimen either exclusively preserved in Kew mixture or also has an accompanying mounted herbarium sheet.

Seed bank: seed collected with accompanying mounted herbarium sheet.

Photograph: photograph taken of the herbarium specimen *in situ*.

Living: seed collected to be propagated *ex situ*. Also has an accompanying mounted herbarium sheet.

The Standard Sites species lists were extracted from the NTVSD and are contained in Appendix 1. Species records from the standard sites contributed an additional 18 species to the final species list for the survey, and herbarium specimens represented 345 species.

A full species list and all specimen records for Groote Eylandt can be accessed via the following DEPWS sources:

- the Flora NT website;
- NT Flora Atlas, and
- Natural Resource (NR) Maps.

External systems include:

- the Australasian Virtual Herbarium;
- the Atlas of Living Australia,
- the Global Biodiversity Information Facility.

Brennan (2019) curated previous vegetation plot-data (NTVSD) and HOLTZE Herbarium specimen records for the archipelago. As at 2019, a checklist for the plants of Groote Eylandt included 990 species (923 native, 71 introduced) with another 73 species dubious plot records from NTVSD. Following the Bush Blitz survey, the total number of species is 1,040, with over 3,300 herbarium specimens collected (487 as a result of this survey).

5. Information for land managers

One of the most notable habitats on Groote Eylandt is the broken sandstone terrain dissected by several long, gorge forming fault lines (Brennan, 2019). These are similar to those across the Arnhem Land plateau which are recognised as a centre for plant species diversity and endemism in the NT (Woinarski *et al*. 2006). Accessibility to these habitats on Groote Eylandt continue to be inhibited due to the absence of roads, by sea can be challenging, and even helicopter access is limited due to the ruggedness of the terrain. There is a high likelihood other species have gone undetected to date. The vegetation type in these gorge systems are characterised as rainforest, a sensitive and significant vegetation type in the NT, and consequently protected under the NT Planning Scheme (Department of Environment and Natural Resource, 2020).

Dune swale habitats are also common on Groote Eylandt, and although not floristically diverse, they support extensive coastal dry vine thicket vegetation, which are classified as a sensitive and significant vegetation community, according to the NT Land Clearing Guidelines (Department of Environment and Natural Resource, 2020).

Seepage areas are common across the broken sandstone terrain and consequently support a high diversity of annual tussock grasses and herbs, most of which were recorded as range extensions as part of this survey, i.e. *Stylidium* spp., *Utricularia* spp. and *Eriocaulon* spp. These habitats form part of a continuum of sandsheet habitats across the Top End. These vegetation types are also classified as sensitive and significant vegetation and support a diverse assemblage of specialist plant species (Cowie, 2005). Wetlands on Groote Eylandt possibly require additional survey effort. The large waterbodies are quite unique in the context of the Top End of the NT. Both freshwater and brackish wetlands would support a diversity of aquatics that are under sampled.

A number of declared weed species are known from Groote but were not detected during the survey. Grader Grass (*Themeda quadrivalvis*) is known from the market garden near the Anurugu community, and should preferably be eradicated. Known incursions of Gamba Grass (*Andropogon gayanus*) have been detected on several occasions, although is thought to be eradicated. The mine is another source for introducing and spreading weeds through disturbance regimes, especially with the expansion to the southern mining leases. Diligence is required for the ongoing management of declared weed species and to avoid new incursions on Groote Eylandt.

Groote Eylandt the largest land mass in Australia with the absence of feral ungulates, which can be one of the main agents causing the spread of weeds across natural habitats. Ongoing management should endeavour to avoid the introduction of ungulates, which can consequently have a negative impact on the native flora and vegetation.

Myrtle rust (*Austropuccinia psidii*) was recorded for the first time on Groote Eylandt in 2018. It was detected opportunistically on an NT native host, *Lithomyrtus retusa*. Myrtle rust was not detected as part of this Bush Blitz survey. There are five known hosts in the NT, including the cultivated *Eugenia reinwardtiana* (non-NT native), and cultivated NT natives: *Leptospermum madidum*, *Syzygium armstrongii* and *Melaleuca leucadendra* (Lewis, 2021). In the NT, *Lithomyrtus retusa* is the only *in situ* host, whereas other NT native species, the rust has either been recorded in cultivation or on nursery stock. The rust has been quite severe in other states, such as NSW and QLD. Efforts should be made to avoid introducing nursery stock of Myrtaceous host species from other jurisdictions to avoid the spread of the rust. Biosecurity

officers and land managers should also be aware of the host species and diagnostics of the rust in order to detect infestations on Groote Eylandt. There is a National Action Plan for Australia (Makinson *et al*., 2020).

6. Other significant findings

The study area supports 60 plant species of conservation significance with two threatened species recorded from Groote Eylandt (Table 6). The bladderwort, *Utricularia singeriana* is listed as 'Vulnerable' under the *Territory Parks and Wildlife Conservation Act* (TPWCA) and was collected for the first time during the survey. *Eleocharis retroflexa* ('Vulnerable' under the Commonwealth *Environmental Protection and Biodiversity Conservation Act*) was first recorded for the island during a survey in 2018. *Utricularia singeriana* was the most notable and unexpected finding made during the Bush Blitz survey. Further survey effort would be required in seasonally waterlogged habitats at the optimal time of the year to determine if it is likely new populations / locations are present on Groote Eylandt.

Nine species listed as Near Threatened under *Territory Parks and Wildlife Conservation Act* (TPWCA) and four Restricted Range species are also known from the study area (Table 6). Some 49 Data Deficient and seven Not Evaluated species require further assessment at national level against IUCN criteria. Data Deficient species may be rare and potentially threatened or just rarely recorded in NT, and generally require additional field surveys to improve understanding of distribution, abundance and potential threats, or taxonomic investigations and genetic studies to clarify species limits. A number of DD species including *Trichosanthes morrisii* and *Sedopsis* sp. sandstone appear to be genuinely rare, NT endemic species in particular need of field survey. For other DD species additional data may have become available since the 2012 NT threatened species review but this has yet to be evaluated. The native species that are Not Evaluated are those only recently discovered to occur in NT and awaiting formal assessment. Additional information on these species can be obtained by searching on Flora NT website (http://eflora.nt.gov.au/). The Vulnerable, Near Threatened and Restricted Range species are especially in need of additional monitoring.

Groote Eylandt is the eastern distributional limit of a number of NT endemic sandstone species (e.g. *Asteromyrtus magnifica*). In particular, Groote Eylandt supports the largest NT populations of *Xanthostemon umbrosus* and *Arenga microcarpa*. The distribution of these species is sparse on the mainland; however, they are locally abundant on Groote Eylandt (the former also occurs in Qld). Groote Eylandt is the only NT location for a number of species found on Cape York Peninsula (the woodland species *Pimelea cornucopiae*, *Alysicarpus aurantiacus*, also the vine thicket margin species *Sida magnifica* and *Sida atherophora*. These four species are known from very few collections.

Table 6. Summary of vascular plant taxa of conservation significance recorded from Groote Eylandt and nearby islands. Threatened species are in bold.

*most significant species

Taxon Name	TPWCA Status	EPBC Status	Restricted Range Species	NT Endemic	Comments
AMARYLLIDACEAE *Crinum roperense*	DD			Y	Taxonomically poorly known. Needs further field and taxonomic assessment.
AMARYLLIDACEAE *Proiphys alba*	DD				Rare in NT; more common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC..
ARALIACEAE *Trachymene tenuifolia*	DD				Rare in NT; common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*ASTERACEAE *Pluchea mesotes*	LC		Y	Y	Nationally rare (only in NT); northern Groote to southern Blue Mud Bay
CELASTRACEAE *Pleurostylia opposita*	NT				Rare in NT; common in Qld; Qld national assessment is LC.
CENTROLEPIDACEAE *Centrolepis* sp. carinate (L.A.Craven & C.R.Dunlop 6668)	DD				Widely distributed in WA and NT; would probably qualify as LC for TPWCA using national data.
CENTROLEPIDACEAE *Centrolepis* sp. squamose seeds (P.K.Latz 3581)	DD				Rare in NT and apparently also Qld; Qld Herbarium collection may require curation to clarify true distribution.
CONVOLVULACEAE *Bonamia linearis*	DD				Widely distributed in WA, NT & QLD; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
CONVOLVULACEAE *Polymeria distigma*	DD				Widely distributed in WA, rare in NT; requires further taxonomic assessment including field work to clarify the currently confused species concepts in the genus.

CONVOLVULACEAE *Polymeria pusilla*.	DD				Uncommon in NT; very common in Qld, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*CUCURBITACEAE *Trichosanthes morrisii*	DD			Y	Rare; two disjunct subpopulations – western Arnhem Land & Groote Eylandt, both on sandstone.
CYMODOCEACEAE *Cymodocea rotundata*	DD				A sea grass: Uncommon in NT & Qld, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
CYMODOCEACEAE *Cymodocea serrulata*	DD				A sea grass: Widely distributed in WA, NT & QLD; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
CYMODOCEACEAE *Halodule pinifolia*	DD				A sea grass: Uncommon in WA, NT & Qld, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
CYMODOCEACEAE *Halodule uninervis*	DD				A sea grass: Widely distributed in WA, NT & QLD; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
CYMODOCEACEAE *Syringodium isoetifolium*	DD				A sea grass: Widely distributed in WA, NT & QLD; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*CYPERACEAE *Cladium mariscus*	LC		Y		Rare in NT; the NT species is a different taxon to more southerly records from Australia; effectively 'NT only in Australia'; also overseas.
CYPERACEAE *Cyperus paniceus*	DD				Rare in NT; more common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
CYPERACEAE *Cyperus scaber*	DD				Rare in NT; very common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
CYPERACEAE *Cyperus tenuiculmis*	DD				Uncommon in NT, rare in WA, where assessed as LC; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.

CYPERACEAE *Eleocharis retroflexa	**DD**	**V**			Rare in NT & Qld, where assessed as V; will probably be reassessed nationally as V for TPWCA.
*CYPERACEAE *Fimbristylis spiralis*	DD			Y	Rare; three disjunct subpopulations – Nitmiluk, northern Blue Mud Bay & Groote Eylandt, poorly drained sandy soils?
CYPERACEAE *Scleria terrestris*	DD				Uncommon in NT; more common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
CYPERACEAE *Thoracostachyum sumatranum*	DD				Uncommon in NT; more common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*DILLENIACEAE *Hibbertia orientalis*	DD		Y	Y	Rare; known only from Groote Eylandt & Bickerton Island, Finch Island and White Islet (Sir Edward Pellew Group) in the Gulf of Carpentaria;
DROSERACEAE *Drosera finlaysoniana*	DD				Newly described; now know to be widespread in inland Australia; would probably qualify for LC for TPWCA using national data; Qld national assessment is LC.
DROSERACEAE *Drosera fulva*	DD			Y	Relatively uncommon in NT; would probably qualify as LC for TPWCA using national data.
DROSERACEAE *Drosera nana*	DD			Y	Newly described; uncommon but widely distributed in the Top End of NT; would probably qualify for LC for TPWCA using national data
EUPHORBIACEAE *Mallotus dispersus*	NT				Has a very patchy distribution in NW WA, eastern NT; far north Qld would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*FABACEAE *Indigofera brennanii*	DD			Y	Rare; known only from Groote Eylandt & Limmen River to Borroloola area, but probably would not qualify as Restricted Range; NT or LC are the most plausible categories for a future assessment under TPWCA.
FABACEAE *Tephrosia laxa*	DD				Uncommon in NT; requires further taxonomic assessment including field work to clarify the species concept.

FABACEAE *Vigna marina*	NT				Rare in NT; common in Qld & NSW, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC
FABACEAE *Zornia muriculata* subsp. *muriculata*	DD				Uncommon in NT; more common in Qld; would probably qualify as LC for TPWCA, using national data; Qld national assessment is LC.
HERNANDIACEAE *Hernandia nymphaeifolia*	NT		Y		A strand species. Rare in NT; more common in Qld; would probably qualify as LC for TPWCA, using national data; Qld national assessment is LC.
*HYDATELLACEAE *Trithuria cowieana*	DD			Y	uncommon but widely distributed in the Top End of NT; would probably qualify for LC for TPWCA using national data
HYDROCHARITACEAE *Enhalus acoroides*	DD				A sea grass: Uncommon in WA, NT & Qld, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC
HYDROCHARITACEAE *Halophila decipiens*	DD				A sea grass: Relatively common in WA & Qld, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC
HYDROCHARITACEAE *Halophila ovalis*	DD				A sea grass: Uncommon in WA, NT & Qld, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC
HYDROCHARITACEAE *Halophila spinulosa*	DD				A sea grass: common in WA, Qld, NSW, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC
HYDROCHARITACEAE *Thalassia hemprichii*	DD				A sea grass: Relatively common in WA & Qld, would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
LAMIACEAE *Clerodendrum longiflorum*	DD				Rare in NT; common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
LENTIBULARIACEAE *Utricularia singeriana	**V**			Y	Rare in NT; Nitmiluk, Kakadu, Darwin area, now also Groote Eylandt.

*LINDERNIACEAE *Buchnera* sp. ciliate bracts (I.D.Cowie & C.R.Dunlop 7878)	DD			Y?	Rare in NT; known from four places, from near Oenpelli to Groote Eylandt.
LINDERNIACEAE *Lindernia tectanthera*	DD				Apparently widely distributed in WA, NT & QLD but species concept may vary widely; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
LINDSAEACEAE *Lindsaea media*	NT				Widely distributed along the north QLD coast; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
LINDSAEACEAE *Lindsaea walkerae*	NT				Uncommon in NT & north QLD; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*LOGANIACEAE *Mitrasacme inornata*	DD				Known from a few disjunct localities from Bathurst Is., in the NT to Russell R. in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC
*LOGANIACEAE *Mitrasacme squamigera*	DD			Y	Rare in NT; Nitmiluk, Gulf, now also Groote Eylandt.
LOMARIOPSIDACEAE *Nephrolepis acutifolia*	NT				Widely distributed along the north QLD coast; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
MENYANTHACEAE *Nymphoides exiliflora*	DD				Uncommon in NT; common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*ORCHIDACEAE *Tropidia territorialis*	DD			Y	Rare in NT; known from five areas, from near Channel Point, near Darwin and Groote Eylandt.
PHYLLANTHACEAE *Synostemon trachyspermus*	DD				A taxonomic DD. The current species concept is very confused and the Herbarium collection requires curation but this cannot happen until a loan is returned.
POACEAE *Coelachne pulchella*	DD				Uncommon in NT; more common in north Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
POACEAE *Eragrostis* sp. islands	DD				A taxonomic DD. This is probably just the common E. cumingii. Requires taxonomic work.

POACEAE *Panicum simile* Domin	DD				Rare in NT; widely distributed in QLD & NSW; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
PORTULACACEAE *Calandrinia arenicola*	DD				Rare in NT; widely distributed north of Townsville in QLD; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*PORTULACACEAE *Sedopsis* sp. sandstone (G.J.Leach 3524)	DD			Y?	Nationally rare (only in NT); northern Groote to Blue Mud Bay
RHIZOPHORACEAE *Bruguiera sexangula*	NT				Uncommon in NT; more common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
RUBIACEAE *Oldenlandia mitrasacmoides* subsp. *nigricans*	DD				Rare in NT; more common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
*STYLIDIACEAE *Stylidium osculum*	NT			Y	Rare in NT; Nitmiluk, now also Groote Eylandt.
STYLIDIACEAE *Stylidium tenerum*	DD				Rare in NT; more common in Qld; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.
TYPHACEAE *Typha orientalis*	DD				Rare in NT; widely distributed in SE Australia; would probably qualify as LC for TPWCA using national data; Qld national assessment is LC.

7. Conclusions

Overall, Groote Eylandt is well surveyed for vascular plants with almost 20% of the NT vascular flora represented. Despite the amount of previous survey effort on Groote Eylandt and apparent comprehensiveness of the species list, this survey added 50 new taxa to the inventory. It is also likely that further targeted survey in rare habitats at appropriate times may yield additional new records, especially for annual and non-vascular taxa.

Of particular focus were the sandstone habitats, drainage systems and wetlands which have previously been poorly collected as a result of restricted access. The sandstone habitat in this area is quite extensive and is known to a support a number of species of conservation interest. It is highly likely to support further, as yet undetected, elements of the sandstone flora known from adjacent biogeographic and botanical regions as well as taxa disjunct from the western Arnhem plateau.

Overall condition of Groote Eylandt is good with few exotic plant species and no feral animals observed during field survey.

The main findings from the June 2021 Bush Blitz survey are summarised below:

- 50 vascular plant species were newly recorded for Groote Eylandt;
- some 1,040 plant taxa are now known from Groote Eylandt;
- 16 species of conservation significance were recorded during the survey including one ‘Vulnerable’ (TPWCA listed), 3 ‘Near Threatened’ and 12 ‘Data Deficient’ taxa (TPWCA);
- Collections of 50 species represented significant range extensions of up to 600km;
- 487 specimens and two standard sites were sampled, representing 361 vascular and two non-vascular taxa;
- Although there were no putative new species, two specimens in particular could not be identified conclusively and require further taxonomic investigation (*Chara* sp. Bush Blitz Groote1 and Moss sp. Bush Blitz Groote1), and
- Introduced flora were generally at low levels on Groote Eylandt where only seven species were collected.

Acknowledgements

The Anindilyakwa Land Council, Anindilyakwa Land and Sea Rangers and Traditional Owners are thanked for permitting the Bush Blitz survey to be conducted on Groote Eylandt, including all of the logistical support and on ground advice for accessing the majority of sites selected for the flora survey. The Anindilyakwa Land and Sea Rangers are also acknowledged for allowing scientists to use the facility, both for accommodation and creating suitable space for processing specimens.

The Bush Blitz team, namely Jo Harding, Helen Cross, Paula Banks and Kate Gillespie are thanked for their impressive logistical support to make the survey happen. Earth Watch staff and teachers participating in the Teach Live program are also thanked for their support and promoting the valuable work of herbaria and the Bush Blitz program in general. North Australian Helicopters are acknowledged for their diligence in flying teams safely to their sampling destinations.

NT Herbarium staff (Sarah Hirst & Richard Boyne) and volunteers are recognised for assistance with processing specimens following the survey. The various tasks include sorting, databasing, destructive sampling for DNA material, mounting and filing. Various DEPWS staff are thanked for ensuring the contract was supported, namely Nick Cuff, Effie Delmadoros and Jo Pridham.

References

Anindilyakwa Land Council (2006). *Anindilyakwa Indigenous Protected Area* Groote Eylandt Archipelago Technical Information Document 2006.

Brennan, K. (2019). A survey of Groote Eylandt eastern gorges. Unpublished Report to Anindilyakwa Land and Sea Rangers.

Brocklehurst, P. & Cowie, I. (1992). Flora survey of the GEMCO mining lease on the western side of Groote Eylandt, Northern Territory. Land Conservation Unit, Conservation Commission of the Northern Territory, Palmerston, Northern Territory.

Brocklehurst, P. (1992). *Melaleuca Survey of the Northern Territory, Document 1: Methodology, Variables and Field Sheet*. Conservation Commission of the Northern Territory, Northern Territory Government. Palmerston, NT Retrieved from http://hdl.handle.net/10070/244420.

Brocklehurst, P., Lewis, D., Napier, D. & Lynch, D. (2007). Northern Territory Guidelines and Field Methodology for Vegetation Survey and Mapping. Department of Natural Resources, Environment and the Arts, Technical Report 02/2007D, Palmerston.

Brocklehurst, P, and Lynch, D. (2009). *Melaleuca Survey of the Top End, Northern Territory: draft document, Technical Report No 25/2009D*. Department of Natural Resources Environment The Arts and Sport, Northern Territory Government. Palmerston, NT Retrieved from http://hdl.handle.net/10070/244421.

Brocklehurst, P, and Van Kerchof, D. (1994). *Melaleuca Survey of the Northern Territory, Document 2: Methodology and Data-base Description*. Conservation Commission of the Northern Territory, Northern Territory Government. Palmerston, NT Retrieved from http://hdl.handle.net/10070/229315.

Brown, R. (1810). *Prodromus Florae Novae Hollandiae et Insulae Van-Diemen*. Taylor, London.

Cowie, I.D. (2005). Goodenia elaiosoma I.D.Cowie (Goodeniaceae), a new species from the Top End of the Northern Territory and a key to the northern species. Austrobaileya 7(1): 205-21.

Cowie, I.D., & Lewis, D.L. (2012). Flora Survey, Fish River Station, Northern Territory. Final Report to Department of Sustainability, Environment, Water and Communities. Department of Land Resource Management, Palmerston.

Cuff, N.J., Lewis, D.L., Jobson, P.C. & Cowie, I.D. (2015). Flora Survey, Judbarra/Gregory National Park, Northern Territory, Version 1. Final Report to Department of the Environment, Australian Biological Resources Study, Canberra. Department of Land Resource Management, Palmerston.

Cowie, I.D., Lewis, D.L.,& Jobson, P. (2017). *Checklist of the Vascular Plants of the Northern Territory: Northern Territory Herbarium.* Department of Land Resource Management, Northern Territory Government. Palmerston, NT.

Department of Environment and Natural Resources. (2020). *Land Clearing Guidelines: Northern Territory Planning Scheme*. Palmerston, NT.

Harrison, L. McGuire, L. Ward, S. Fisher, A. Pavey, C. Fegan, M. & Lynch, B. (2009). An inventory of sites of international and national significance for biodiversity values in the Northern Territory. Department of Natural Resources, Environment, The Arts and Sport, Darwin, NT.

IUCN (2001). *IUCN Red List Categories: Version 3.1*. Prepared by the IUCN Species Survival Commission. IUCN: Gland, Switzerland and Cambridge, UK.

IUCN (2014). Guidelines for using the IUCN Red List Categories and Criteria. Version 11. Prepared by the Standards and Petitions Subcommittee.

Levitt, D. (1981). Plants and People: Aboriginal Uses of Plants on Groote Eylandt. Australian Institute of Aboriginal Studies: Canberra.

Lewis, D., Brocklehurst, P., Thackway, R. & Hill, J. (2008). *Adopting vegetation guidelines and the national vegetation information system (NVIS) framework in the Northern Territory*. Cunninghamia 10, 557–567.

Lewis, D. (2021). Current status of Austropuccinia psidii in the Northern Territory - locations and hosts. Myrtle Rust National Symposium: Galvanising action to conserve native plant species threatened by myrtle rust, Ballina, NSW.

Makinson R.O., Pegg G.S. & Carnegie A.J. (2020). Myrtle Rust in Australia – a National Action Plan. Australian Plant Biosecurity Science Foundation, Canberra, Australia.

NVIS Technical Working Group. (2017). 'Australian Vegetation Attribute Manual: National Vegetation Information System, Version 7.0' (Department of the Environment and Energy, Canberra, ACT, Australia).

Russell-Smith, J. (1991). *Classification, species richness, and environmental relations of monsoon rain forest in Northern Australia*. Journal of Vegetation Science 2: 259-278.

Short, P. (2003). 'In Pursuit of Plants: Experiences Of nineteenth and Early Twentieth Century Plant Collectors.' (University of Western Australia Press: Perth, WA, Australia).

Specht, R. L. (1958). The Gymnospermae and Angiospermae collected on the Arnhem Land Expedition. In R. L. Specht & C. P. Mountford (eds). Records of the American-Australian Scientific Expedition to Arnhem Land. 3. Botany and Plant Ecology. (Melbourne University Press: Carlton). pp. 185–318.

Thackway, R., Neldner, V.J., Bolton, M.P. (2008). Vegetation. In 'Australian Soil and Land Survey Handbook: Guidelines for Surveying Soil and Land Resources'. (Eds N.J. McKenzie, M.J. Grundy, R. Webster, A.J. RingroseVoase) pp. 115–142. CSIRO Publishing: Melbourne, Vic., Australia.

Tindale, M.D. (1958). The Pteridophyta of Arnhem Land. In R. L. Specht & C. P. Mountford (eds). Records of the American-Australian Scientific Expedition to Arnhem Land. 3. Botany and Plant Ecology. (Melbourne University Press: Carlton). pp. 171–184.

Wilson, B.A., Brocklehurst, PS., Clarke, M.J. & Dickinson, K.J.M. (1990). 'Vegetation Survey and Mapping of the Northern Territory, Australia'. Technical Report No. 49, Conservation Commission of the Northern Territory, Darwin.

Woinarski, J., Hempel, C., Cowie, I., Brennan, K., Kerrigan, R., Leach, G. & Russell-Smith, J. (2006). *Distributional patterning of plant species endemic to the Northern Territory, Australia*. Australian Journal of Botany 54 (7): 627-640.

Appendix 1. List of plants recorded during the Groote Eylandt Bush Blitz						
Family	**Species**	**Common name**	**Putative new species**	**Threatened (EPBC Act)**	**Threatened (State / Territory Act)**	**Exotic/ pest**
ACANTHACEAE	*Avicennia marina* subsp. *eucalyptifolia*	Avicennia, Grey Mangrove	No	No	No	No
ACANTHACEAE	*Hypoestes floribunda* var. *varia*	Hypoestes	No	No	No	No
ACANTHACEAE	*Nelsonia campestris*	Nelsonia	No	No	No	No
AMARANTHACEAE	*Gomphrena canescens*	Gomphrena, Bush Everlasting, Pink Everlasting	No	No	No	No
AMARANTHACEAE	*Gomphrena flaccida*	Gomphrena, Bunched Gomphrena	No	No	No	No
AMARANTHACEAE	*Ptilotus fusiformis*	Ptilotus, Skeleton Plant, Pom-pom	No	No	No	No
ANACARDIACEAE	*Buchanania obovata*	Buchanania, Green Plum, Wild Mango	No	No	No	No
APOCYNACEAE	*Alyxia spicata*	Alyxia	No	No	No	No
APOCYNACEAE	*Cynanchum viminale* subsp. *brunonianum*	Sarcostemma	No	No	No	No
APOCYNACEAE	*Vincetoxicum carnosum*	Vincetoxicum	No	No	No	No
APOCYNACEAE	*Wrightia saligna*	Wrightia, Milk Bush, Coolaroo	No	No	No	No
ARALIACEAE	*Trachymene tenuifolia*	Trachymene	No	No	Data Deficient	No
ASPARAGACEAE	*Lomandra tropica*	Lomandra	No	No	No	No
ASPARAGACEAE	*Thysanotus chinensis*	Thysanotus	No	No	No	No
ASTERACEAE	*Allopterigeron filifolius*	Allopterigeron	No	No	No	No
ASTERACEAE	*Blainvillea cunninghamii*	Wedelia	No	No	No	No
ASTERACEAE	*Blumea diffusa*	Blumea	No	No	No	No
ASTERACEAE	*Blumea saxatilis*	Blumea	No	No	No	No
ASTERACEAE	*Blumea tenella*	Blumea	No	No	No	No
ASTERACEAE	*Pterocaulon tricholobum*	Pterocaulon	No	No	No	No
ASTERACEAE	*Thespidium basiflorum*	Thespidium	No	No	No	No
ASTERACEAE	*Wollastonia biflora* var. *biflora*	Melanthera	No	No	No	No
BORAGINACEAE	*Cordia dichotoma*	Cordia	No	No	No	No
BORAGINACEAE	*Heliotropium bracteatum*	Heliotropium	No	No	No	No
BORAGINACEAE	*Trichodesma zeylanicum*	Trichodesma, Cattle Bush, Camel Bush	No	No	No	No
BURMANNIACEAE	*Burmannia juncea*	Burmannia	No	No	No	No
CAMPANULACEAE	*Lobelia dioica*	Lobelia	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
CANNABACEAE	*Celtis philippensis*	Celtis	No	No	No	No
CANNABACEAE	*Trema tomentosa*	Trema, Peach-leaved Poison Bush, Poison Peach, Native Peach	No	No	No	No
CARYOPHYLLACEAE	*Polycarpaea corymbosa*	Polycarpaea	No	No	No	No
CARYOPHYLLACEAE	*Polycarpaea* sp. sandstone (C.R.Dunlop 4567)	Polycarpaea	No	No	No	No
CASUARINACEAE	*Casuarina equisetifolia*	Casuarina, Coastal She-Oak	No	No	No	No
CELASTRACEAE	*Denhamia obscura*	Denhamia	No	No	No	No
CELASTRACEAE	*Stackhousia intermedia*	Stackhousia, Wiry Stackhousia	No	No	No	No
CENTROLEPIDACEAE	*Centrolepis banksii*	Centrolepis	No	No	No	No
CENTROLEPIDACEAE	*Centrolepis exserta*	Centrolepis	No	No	No	No
CENTROLEPIDACEAE	*Centrolepis* sp. carinate (L.A.Craven & C.R.Dunlop 6668)	Centrolepis	No	No	Data Deficient	No
CENTROLEPIDACEAE	*Centrolepis* sp. squamose seeds (P.K.Latz	Centrolepis	No	No	Data Deficient	No
CHARACEAE	*Chara* sp. Bush Blitz Groote1	Chara	No	No	No	No
CHENOPODIACEAE	*Tecticornia indica* subsp. *indica*	Tecticornia	No	No	No	No
COMBRETACEAE	*Lumnitzera racemosa*	Lumnitzera, White-flowered Black Mangrove	No	No	No	No
COMBRETACEAE	*Terminalia carpentariae*	Terminalia, Billy Goat Plum, Wild Peach	No	No	No	No
COMBRETACEAE	*Terminalia latipes*	Terminalia	No	No	No	No
COMMELINACEAE	*Cartonema parviflorum*	Cartonema	No	No	No	No
COMMELINACEAE	*Murdannia graminea*	Murdannia, Blue Murdannia, Pink Swamp Lily, Grass Lily, Slug Lily	No	No	No	No
CONVOLVULACEAE	*Evolvulus nummularius*	Evolvulus	No	No	No	Yes
CONVOLVULACEAE	*Ipomoea coptica*	Ipomoea	No	No	No	No
CONVOLVULACEAE	*Ipomoea eriocarpa*	Ipomoea	No	No	No	No
CONVOLVULACEAE	*Ipomoea pes-caprae*	Ipomoea, Beach Morning Glory	No	No	No	No
CONVOLVULACEAE	*Jacquemontia paniculata*	Jacquemontia	No	No	No	No
CONVOLVULACEAE	*Operculina brownii*	Operculina	No	No	No	No
CONVOLVULACEAE	*Polymeria pusilla*	Polymeria	No	No	Data Deficient	No
CONVOLVULACEAE	*Xenostegia tridentata*	Xenostegia	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
CUCURBITACEAE	*Trichosanthes cucumerina* var. *cucumerina*	Trichosanthes	No	No	No	No
CUPRESSACEAE	*Callitris intratropica*	Callitris, Cypress Pine, Northern Cypress Pine, White Cypress Pine	No	No	No	No
CYPERACEAE	*Cladium mariscus*	Cladium	No	No	No	No
CYPERACEAE	*Cyperus aquatilis*	Cyperus, Flat-head Rush, Nutgrass	No	No	No	No
CYPERACEAE	*Cyperus cristulatus*	Cyperus, Nutgrass	No	No	No	No
CYPERACEAE	*Cyperus haspan* subsp. *juncoides*	Cyperus, Nutgrass	No	No	No	No
CYPERACEAE	*Eleocharis dulcis*	Eleocharis, Water Chestnut	No	No	No	No
CYPERACEAE	*Eleocharis geniculata*	Eleocharis	No	No	No	No
CYPERACEAE	*Eleocharis rivalis*	Eleocharis	No	No	No	No
CYPERACEAE	*Eleocharis spiralis*	Eleocharis	No	No	No	No
CYPERACEAE	*Eleocharis sundaica*	Eleocharis	No	No	No	No
CYPERACEAE	*Fimbristylis acicularis*	Fimbristylis, Fringe-rush	No	No	No	No
CYPERACEAE	*Fimbristylis acuminata*	Fimbristylis, Fringe-rush	No	No	No	No
CYPERACEAE	*Fimbristylis ferruginea*	Fimbristylis, Fringe-rush	No	No	No	No
CYPERACEAE	*Fimbristylis furva*	Fimbristylis, Fringe-rush	No	No	No	No
CYPERACEAE	*Fimbristylis lanceolata*	Fimbristylis, Fringe-rush	No	No	No	No
CYPERACEAE	*Fimbristylis pauciflora*	Fimbristylis, Fringe-rush	No	No	No	No
CYPERACEAE	*Fimbristylis polytrichoides*	Fimbristylis, Fringe-rush	No	No	No	No
CYPERACEAE	*Fimbristylis rara*	Fimbristylis	No	No	No	No
CYPERACEAE	*Fimbristylis squarrulosa*	Fimbristylis, Overlapping Fringe-rush, Fringe-rush	No	No	No	No
CYPERACEAE	*Fimbristylis stenostachya*	Fimbristylis, Fringe-rush	No	No	No	No
CYPERACEAE	*Fuirena ciliaris*	Fuirena, Small Club Rush	No	No	No	No
CYPERACEAE	*Fuirena umbellata*	Fuirena	No	No	No	No
CYPERACEAE	*Rhynchospora heterochaeta*	Rhynchospora	No	No	No	No
CYPERACEAE	*Rhynchospora pterochaeta*	Rhynchospora, Rusty Heads	No	No	No	No
CYPERACEAE	*Schoenus calostachyus*	Schoenus	No	No	No	No
CYPERACEAE	*Schoenus sparteus*	Schoenus	No	No	No	No
CYPERACEAE	*Scleria ciliaris*	Scleria	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
CYPERACEAE	*Scleria laxa*	Scleria	No	No	No	No
CYPERACEAE	*Scleria novae-hollandiae*	Scleria	No	No	No	No
CYPERACEAE	*Scleria pygmaea*	Scleria	No	No	No	No
DENNSTAEDTIACEAE	*Pteridium aquilinum* subsp. *wightianum*	Pteridium	No	No	No	No
DILLENIACEAE	*Dillenia alata*	Dillenia	No	No	No	No
DILLENIACEAE	*Hibbertia complanata*	Pachynema	No	No	No	No
DILLENIACEAE	*Hibbertia lepidota*	Hibbertia	No	No	No	No
DILLENIACEAE	*Hibbertia oblongata*	Hibbertia	No	No	No	No
DILLENIACEAE	*Hibbertia oblongata* subsp. *brevifolia*	Hibbertia	No	No	No	No
DILLENIACEAE	*Hibbertia oblongata* subsp. *oblongata*	Hibbertia	No	No	No	No
DILLENIACEAE	*Hibbertia tomentosa*	Hibbertia	No	No	No	No
DROSERACEAE	*Drosera aquatica*	Drosera	No	No	Not Evaluated	No
DROSERACEAE	*Drosera banksii*	Drosera	No	No	No	No
DROSERACEAE	*Drosera burmanni*	Drosera, Tropical Sundew, Burmans Sundew, Sundew	No	No	No	No
DROSERACEAE	*Drosera finlaysoniana*	Drosera	No	No	Data Deficient	No
DROSERACEAE	*Drosera nana*	Drosera	No	No	Data Deficient	No
DROSERACEAE	*Drosera serpens*	Drosera	No	No	No	No
EBENACEAE	*Diospyros humilis*	Diospyros, Ebony	No	No	No	No
EBENACEAE	*Diospyros rugosula*	Diospyros	No	No	No	No
ELAEOCARPACEAE	*Elaeocarpus arnhemicus*	Elaeocarpus	No	No	No	No
ERIOCAULACEAE	*Eriocaulon cinereum*	Eriocaulon	No	No	No	No
ERIOCAULACEAE	*Eriocaulon depressum*	Eriocaulon	No	No	No	No
ERIOCAULACEAE	*Eriocaulon fistulosum*	Eriocaulon	No	No	No	No
ERIOCAULACEAE	*Eriocaulon odontospermum*	Eriocaulon	No	No	No	No
ERIOCAULACEAE	*Eriocaulon pusillum*	Eriocaulon	No	No	No	No
ERIOCAULACEAE	*Eriocaulon setaceum*	Eriocaulon	No	No	No	No
ERIOCAULACEAE	*Eriocaulon spectabile*	Eriocaulon	No	No	No	No
ERIOCAULACEAE	*Eriocaulon tortuosum*	Eriocaulon	No	No	No	No
EUPHORBIACEAE	*Euphorbia bifida*	Euphorbia	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
EUPHORBIACEAE	*Euphorbia tannensis*	Euphorbia, Caustic Bush, Desert Spurge, Bottle Tree Caustic	No	No	No	No
EUPHORBIACEAE	*Microstachys chamaelea*	Microstachys, Sebastiania	No	No	No	No
FABACEAE	*Acacia alleniana*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia humifusa*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia lamprocarpa*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia latescens*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia linarioides*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia multisiliqua*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia nuperrima*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia oncinocarpa*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia simsii*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia sublanata*	Acacia, Wattle	No	No	No	No
FABACEAE	*Acacia torulosa*	Acacia, Torulosa Wattle, Deep-gold Wattle, Wattle	No	No	No	No
FABACEAE	*Acacia yirrkallensis*	Acacia, Wattle	No	No	No	No
FABACEAE	*Alysicarpus ovalifolius*	Alysicarpus	No	No	No	Yes
FABACEAE	*Aphyllodium schindleri*	Aphyllodium	No	No	No	No
FABACEAE	*Bossiaea bossiaeoides*	Bossiaea	No	No	No	No
FABACEAE	*Cajanus acutifolius*	Cajanus	No	No	No	No
FABACEAE	*Cajanus reticulatus* var. *maritimus*	Cajanus	No	No	No	No
FABACEAE	*Canavalia papuana*	Canavalia	No	No	No	No
FABACEAE	*Chamaecrista absus* var. *absus*	Chamaecrista, Hairy Cassia	No	No	No	No
FABACEAE	*Chamaecrista nigricans*	Chamaecrista	No	No	No	No
FABACEAE	*Chamaecrista nomame*	Chamaecrista	No	No	No	No
FABACEAE	*Crotalaria brevis*	Crotalaria, Rattlepod	No	No	No	No
FABACEAE	*Crotalaria medicaginea* var. *neglecta*	Crotalaria, Clover-leaf Rattlepod, Trefoil Rattlepod, Rattlepod	No	No	No	No
FABACEAE	*Crotalaria retusa*	Crotalaria, Wedge-leaf Rattlepod, Kimberley Horse Poison, Rattlepod	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
FABACEAE	*Erythrophleum chlorostachys*	Erythrophleum, Ironwood, Cooktown Ironwood, Camel Poison	No	No	No	No
FABACEAE	*Flemingia lineata*	Flemingia	No	No	No	No
FABACEAE	*Flemingia parviflora*	Flemingia	No	No	No	No
FABACEAE	*Galactia tenuiflora*	Galactia, Poison Pea	No	No	No	No
FABACEAE	*Gompholobium subulatum*	Gompholobium	No	No	No	No
FABACEAE	*Grona trichostachya*	Desmodium	No	No	No	No
FABACEAE	*Indigofera colutea*	Indigofera, Sticky Indigo, Rusty Indigo	No	No	No	No
FABACEAE	*Jacksonia dilatata*	Jacksonia	No	No	No	No
FABACEAE	*Leptosema bossiaeoides*	Leptosema	No	No	No	No
FABACEAE	*Leptosema villosum*	Leptosema	No	No	No	No
FABACEAE	*Sophora tomentosa*	Sophora	No	No	No	No
FABACEAE	*Stylosanthes viscosa*	Stylosanthes, Stylo	No	No	No	Yes
FABACEAE	*Tephrosia conspicua*	Tephrosia	No	No	No	No
FABACEAE	*Tephrosia juncea*	Tephrosia	No	No	No	No
FABACEAE	*Tephrosia phaeosperma*	Tephrosia	No	No	No	No
FABACEAE	*Tephrosia remotiflora*	Tephrosia	No	No	No	No
FABACEAE	*Tephrosia* sp. Muddy Bay (P.I.Forster+	Tephrosia	No	No	No	No
FABACEAE	*Tephrosia spechtii*	Tephrosia	No	No	No	No
FABACEAE	*Vigna lanceolata* var. *filiformis*	Vigna, Pencil Yam, Maloga Bean, Parsnip Bean	No	No	No	No
FABACEAE	*Vigna vexillata*	Vigna	No	No	No	No
GLEICHENIACEAE	*Dicranopteris linearis* var. *linearis*	Dicranopteris, Hay Rake Fern, Coral Fern, River Fern	No	No	No	No
GOODENIACEAE	*Goodenia armstrongiana*	Goodenia	No	No	No	No
GOODENIACEAE	*Goodenia hispida*	Goodenia	No	No	No	No
GOODENIACEAE	*Goodenia neglecta*	Goodenia	No	No	No	No
GOODENIACEAE	*Goodenia pilosa*	Goodenia	No	No	No	No
GOODENIACEAE	*Goodenia pumilio*	Goodenia	No	No	No	No
GOODENIACEAE	*Scaevola angulata*	Scaevola	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
GOODENIACEAE	*Scaevola taccada*	Scaevola	No	No	No	No
HALORAGACEAE	*Gonocarpus chinensis*	Gonocarpus	No	No	No	No
HALORAGACEAE	*Gonocarpus leptothecus*	Gonocarpus	No	No	No	No
HEMEROCALLIDACEAE	*Dianella odorata*	Dianella	No	No	No	No
HYDATELLACEAE	*Trithuria cowieana*	Trithuria	No	No	Data Deficient	No
HYDATELLACEAE	*Trithuria lanterna*	Trithuria	No	No	No	No
LAMIACEAE	*Anisomeles carpentarica*	Anisomeles	No	No	No	No
LAMIACEAE	*Plectranthus scutellarioides*	Plectranthus	No	No	No	No
LENTIBULARIACEAE	*Utricularia aurea*	Utricularia, Bladderwort	No	No	No	No
LENTIBULARIACEAE	*Utricularia bifida*	Utricularia, Bladderwort	No	No	No	No
LENTIBULARIACEAE	*Utricularia caerulea*	Utricularia, Bladderwort	No	No	No	No
LENTIBULARIACEAE	*Utricularia capilliflora*	Utricularia, Bladderwort	No	No	No	No
LENTIBULARIACEAE	*Utricularia chrysantha*	Utricularia, Bladderwort	No	No	No	No
LENTIBULARIACEAE	*Utricularia gibba*	Utricularia, Bladderwort	No	No	No	No
LENTIBULARIACEAE	*Utricularia limosa*	Utricularia, Bladderwort	No	No	No	No
LENTIBULARIACEAE	*Utricularia quinquedentata*	Utricularia, Bladderwort	No	No	No	No
LENTIBULARIACEAE	*Utricularia singeriana*	Utricularia, Bladderwort	No	No	Vulnerable	No
LENTIBULARIACEAE	*Utricularia uliginosa*	Utricularia, Bladderwort	No	No	No	No
LINDERNIACEAE	*Buchnera gracilis*	Buchnera	No	No	No	No
LINDERNIACEAE	*Buchnera linearis*	Buchnera, Dainty Bush Flower	No	No	No	No
LINDERNIACEAE	*Buchnera tetragona*	Buchnera	No	No	No	No
LINDERNIACEAE	*Centranthera cochinchinensis*	Centranthera	No	No	No	No
LINDERNIACEAE	*Lindernia alsinoides*	Lindernia	No	No	No	No
LINDERNIACEAE	*Lindernia aplectra*	Lindernia	No	No	No	No
LINDERNIACEAE	*Lindernia scapigera*	Lindernia	No	No	No	No
LINDERNIACEAE	*Lindernia tectanthera*	Lindernia	No	No	Data Deficient	No
LINDERNIACEAE	*Striga curviflora*	Striga	No	No	No	No
LINDSAEACEAE	*Lindsaea media*	Lindsaea	No	No	Near Threatened	No
LOGANIACEAE	*Mitrasacme ambigua*	Mitrasacme	No	No	No	No
LOGANIACEAE	*Mitrasacme elata*	Mitrasacme	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
LOGANIACEAE	*Mitrasacme laevis*	Mitrasacme	No	No	No	No
LOGANIACEAE	*Mitrasacme laricifolia*	Mitrasacme	No	No	No	No
LOGANIACEAE	*Mitrasacme multicaulis*	Mitrasacme	No	No	No	No
LOGANIACEAE	*Mitrasacme* sp. Bush Blitz Groote1	Mitrasacme	No	No	No	No
LOGANIACEAE	*Mitrasacme stellata*	Mitrasacme	No	No	No	No
LYTHRACEAE	*Ammannia triflora*	Ammannia	No	No	No	No
LYTHRACEAE	*Rotala mexicana*	Rotala	No	No	No	No
MALVACEAE	*Brachychiton paradoxus*	Brachychiton, Red-flowered Kurrajong, Red-flowering Kurrajong	No	No	No	No
MALVACEAE	*Corchorus sidoides* subsp. *rostrisepalus*	Corchorus, Flannel Weed	No	No	No	No
MALVACEAE	*Corchorus sidoides* subsp. *sidoides*	Corchorus, Flannel Weed	No	No	No	No
MALVACEAE	*Grewia retusifolia*	Grewia, Dog's Balls, Emu Berry,	No	No	No	No
MALVACEAE	*Helicteres angustifolia*	Helicteres	No	No	No	No
MALVACEAE	*Helicteres cana* subsp. *cana*	Helicteres	No	No	No	No
MALVACEAE	*Hibiscus leptocladus*	Hibiscus, Variable-leaf Hibiscus, Slender Hibiscus	No	No	No	No
MALVACEAE	*Hibiscus zonatus*	Hibiscus	No	No	No	No
MALVACEAE	*Melhania oblongifolia*	Melhania, Velvet Hibiscus	No	No	No	No
MALVACEAE	*Seringia corollata*	Keraudrenia	No	No	No	No
MALVACEAE	*Sida acuta*	Spiny-head Sida	No	No	No	Yes
MALVACEAE	*Sida magnifica*	Sida	No	No	No	No
MALVACEAE	*Sida* sp. Groote Eylandt (C.R.Dunlop 9300 & G.J.Leach)	Sida	No	No	No	No
MALVACEAE	*Triumfetta albida*	Triumfetta	No	No	No	No
MALVACEAE	*Triumfetta denticulata*	Triumfetta	No	No	No	No
MALVACEAE	*Triumfetta pannosa*	Triumfetta	No	No	No	No
MALVACEAE	*Triumfetta sylvicola*	Triumfetta	No	No	No	No
MALVACEAE	*Waltheria indica*	Waltheria	No	No	No	No
MELASTOMATACEAE	*Memecylon pauciflorum*	Memecylon	No	No	No	No
MELASTOMATACEAE	*Osbeckia chinensis*	Osbeckia	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
MELIACEAE	*Aglaia brownii*	Aglaia	No	No	No	No
MELIACEAE	*Owenia vernicosa*	Owenia, Emu Apple, Candlestick Tree	No	No	No	No
MELIACEAE	*Xylocarpus moluccensis*	Xylocarpus, Cedar Mangrove,	No	No	No	No
MENYANTHACEAE	*Nymphoides exiliflora*	Nymphoides	No	No	Data Deficient	No
MOLLUGINACEAE	*Trigastrotheca pentaphylla*	Mollugo	No	No	No	Yes
MORACEAE	*Ficus aculeata* var. *aculeata*	Ficus, Sandpaper Fig	No	No	No	No
MORACEAE	*Ficus henneana*	Ficus, Superb Fig	No	No	No	No
MYRISTICACEAE	*Myristica insipida* var. *insipida*	Myristica, Native Nutmeg	No	No	No	No
MYRTACEAE	*Asteromyrtus magnifica*	Asteromyrtus	No	No	No	No
MYRTACEAE	*Asteromyrtus symphyocarpa*	Asteromyrtus, Liniment Bush	No	No	No	No
MYRTACEAE	*Calytrix brownii*	Calytrix	No	No	No	No
MYRTACEAE	*Corymbia bella*	Corymbia, Ghost Gum, White Gum, Carbeen, Paper-fruited Bloodwood	No	No	No	No
MYRTACEAE	*Corymbia ferruginea*	Corymbia, Rusty Bloodwood, Rusty-leaf Bloodwood, Bloodwood	No	No	No	No
MYRTACEAE	*Corymbia kombolgiensis*	Corymbia, Paper-fruited Bloodwood	No	No	No	No
MYRTACEAE	*Corymbia pauciseta*	Corymbia	No	No	No	No
MYRTACEAE	*Corymbia polycarpa*	Corymbia, Long-fruited Bloodwood, Small-flowered Bloodwood,	No	No	No	No
MYRTACEAE	*Eucalyptus alba* var. *australasica*	Eucalyptus, Salmon Gum	No	No	No	No
MYRTACEAE	*Eucalyptus miniata*	Eucalyptus, Woollybutt, Woolly Butt, Darwin Woollybutt, Manawan	No	No	No	No
MYRTACEAE	*Eucalyptus tetrodonta*	Eucalyptus, Darwin Stringybark, Stringybark, Messmate	No	No	No	No
MYRTACEAE	*Homalocalyx ericaeus*	Homalocalyx	No	No	No	No
MYRTACEAE	*Lithomyrtus retusa*	Lithomyrtus	No	No	No	No
MYRTACEAE	*Melaleuca acacioides*	Melaleuca, Coastal Paperbark, Black Tea-tree, Paperbark	No	No	No	No
MYRTACEAE	*Melaleuca cajuputi* subsp. *cajuputi*	Melaleuca, Cajuput, Cajuput Tree, Paperbark	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
MYRTACEAE	*Melaleuca viridiflora*	Melaleuca, Broad-leaved Paperbark, Broad -leaf Paperbark, Green Paperbark, Large-leaved Paperbark,	No	No	No	No
MYRTACEAE	*Xanthostemon umbrosus*	Xanthostemon	No	No	No	No
NYMPHAEACEAE	*Nymphaea violacea*	Nymphaea, Water Lily	No	No	No	No
OLEACEAE	*Jasminum didymum*	Jasminum, Native Jasmine, Wild	No	No	No	No
ONAGRACEAE	*Ludwigia octovalvis*	Ludwigia, Willow Primrose	No	No	No	No
ONAGRACEAE	*Ludwigia perennis*	Ludwigia, Upright Primrose	No	No	No	No
ORCHIDACEAE	*Dendrobium dicuphum*	Dendrobium, Tree Orchid	No	No	No	No
ORCHIDACEAE	*Nervilia holochila*	Nervilia	No	No	No	No
PANDANACEAE	*Pandanus spiralis*	Pandanus, Srew-palm, Pandanus Palm	No	No	No	No
PHILYDRACEAE	*Philydrum lanuginosum*	Philydrum, Frogsmouth, Woolly Waterlily	No	No	No	No
PHRYMACEAE	*Uvedalia* sp. Groote Eylandt (R.L.Specht 335)	Mimulus	No	No	No	No
PHYLLANTHACEAE	*Bridelia tomentosa*	Bridelia	No	No	No	No
PHYLLANTHACEAE	*Phyllanthus carpentariae*	Phyllanthus	No	No	No	No
PHYLLANTHACEAE	*Phyllanthus exilis*	Phyllanthus	No	No	No	No
PHYLLANTHACEAE	*Phyllanthus hebecarpus*	Phyllanthus	No	No	No	No
PHYLLANTHACEAE	*Phyllanthus minutiflorus*	Phyllanthus	No	No	No	No
PHYLLANTHACEAE	*Phyllanthus urinaria*	Phyllanthus	No	No	No	No
PHYLLANTHACEAE	*Sauropus stenocladus*	Sauropus	No	No	No	No
PICRODENDRACEAE	*Petalostigma banksii*	Petalostigma, Smooth-leaved Quinine	No	No	No	No
PICRODENDRACEAE	*Petalostigma pubescens*	Petalostigma, Quinine Bush, Quinine Tree, Downy Cracker Bush	No	No	No	No
PICRODENDRACEAE	*Petalostigma quadriloculare*	Petalostigma, Witchetty Bush	No	No	No	No
PLANTAGINACEAE	*Bacopa floribunda*	Bacopa	No	No	No	No
PLANTAGINACEAE	*Limnophila fragrans*	Limnophila	No	No	No	No
PLANTAGINACEAE	*Scoparia dulcis*	Scoparia	No	No	Not Evaluated	No
PLANTAGINACEAE	*Stemodia debilis*	Stemodia	No	No	No	No
PLANTAGINACEAE	*Stemodia lythrifolia*	Stemodia	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
POACEAE	*Aristida exserta*	Aristida, Three-awn, Wiregrass	No	No	No	No
POACEAE	*Aristida holathera*	Aristida, Erect Kerosene Grass, Erect Windgrass, White Grass, Arrow Grass, Three-awn, Wiregrass	No	No	No	No
POACEAE	*Aristida schultzii*	Aristida, Three-awn, Wiregrass	No	No	No	No
POACEAE	*Aristida utilis* var. *utilis*	Aristida, Three-awn, Wiregrass	No	No	No	No
POACEAE	*Arundinella nepalensis*	Arundinella, Reedgrass	No	No	No	No
POACEAE	*Bothriochloa pertusa*	Bothriochloa	No	No	No	Yes
POACEAE	*Coelachne pulchella*	Coelachne	No	No	Data Deficient	No
POACEAE	*Cymbopogon procerus*	Cymbopogon, Scentgrass, Tall Silk-grass, Lemon Grass	No	No	No	No
POACEAE	*Digitaria bicornis*	Digitaria	No	No	No	Yes
POACEAE	*Digitaria papposa*	Digitaria	No	No	No	No
POACEAE	*Dimeria acinaciformis*	Dimeria	No	No	No	No
POACEAE	*Dimeria chloridiformis*	Dimeria	No	No	No	No
POACEAE	*Dimeria ornithopoda*	Dimeria	No	No	No	No
POACEAE	*Ectrosia agrostoides*	Ectrosia	No	No	No	No
POACEAE	*Ectrosia leporina*	Ectrosia, Hares-foot Grass. Hare's Foot Grass	No	No	No	No
POACEAE	*Eragrostis* sp. Bush Blitz Groote1	Eragrostis	No	No	No	No
POACEAE	*Eriachne avenacea*	Eriachne, Wanderrie Grass	No	No	No	No
POACEAE	*Eriachne filiformis*	Eriachne, Wanderrie Grass	No	No	No	No
POACEAE	*Eriachne stipacea*	Eriachne, Wanderrie Grass	No	No	No	No
POACEAE	*Eriachne triseta*	Eriachne, Wanderrie Grass	No	No	No	No
POACEAE	*Heterachne gulliveri* var. *gulliveri*	Heterachne	No	No	No	No
POACEAE	*Isachne confusa*	Isachne	No	No	No	No
POACEAE	*Ischaemum decumbens*	Ischaemum	No	No	No	No
POACEAE	*Ischaemum fragile*	Ischaemum	No	No	No	No
POACEAE	*Mnesithea formosa*	Mnesithea, Red Grass, Itchgrass, Silky-	No	No	No	No
POACEAE	*Panicum mindanaense*	Panicum	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
POACEAE	*Panicum seminudum* var. *cairnsianum*	Panicum	No	No	No	No
POACEAE	*Panicum trichoides*	Panicum	No	No	No	No
POACEAE	*Pheidochloa gracilis*	Pheidochloa	No	No	No	No
POACEAE	*Phragmites karka*	Phragmites	No	No	No	No
POACEAE	*Pseudopogonatherum irritans*	Pseudopogonatherum	No	No	No	No
POACEAE	*Sacciolepis indica*	Sacciolepis	No	No	No	No
POACEAE	*Sacciolepis myosuroides*	Sacciolepis	No	No	No	No
POACEAE	*Schizachyrium pseudeulalia*	Schizachyrium, Short-leaved Silk Grass	No	No	No	No
POACEAE	*Setaria apiculata*	Setaria, Pigeon Grass	No	No	No	No
POACEAE	*Sorghum stipoideum*	Sorghum, Annual Native Sorghum, Sand Soil Canegrass	No	No	No	No
POACEAE	*Spinifex longifolius*	Spinifex	No	No	No	No
POACEAE	*Thaumastochloa brassii*	Thaumastochloa	No	No	No	No
POACEAE	*Thaumastochloa major*	Thaumastochloa	No	No	No	No
POACEAE	*Whiteochloa airoides*	Whiteochloa	No	No	No	No
POACEAE	*Xerochloa imberbis*	Xerochloa	No	No	No	No
POLYGALACEAE	*Polygala longifolia*	Polygala	No	No	No	No
POLYGALACEAE	*Salomonia ciliata*	Salomonia	No	No	No	No
POLYPODIACEAE	*Drynaria quercifolia*	Drynaria, Rock Fern	No	No	No	No
PORTULACACEAE	*Calandrinia gracilis*	Calandrinia	No	No	No	No
PORTULACACEAE	*Calandrinia spergularina*	Calandrinia	No	No	No	No
PRIMULACEAE	*Aegiceras corniculatum*	Aegiceras, River Mangrove	No	No	No	No
PROTEACEAE	*Grevillea heliosperma*	Grevillea, Rock Grevillea	No	No	No	No
PROTEACEAE	*Grevillea pteridifolia*	Grevillea, Fern-leaved Grevillea, Silky Grevillea, Kimberley Christmas Tree, Golden Parrot Tree, Golden Toothbrush Grevillea	No	No	No	No
PROTEACEAE	*Grevillea pungens*	Grevillea	No	No	No	No
PROTEACEAE	*Hakea arborescens*	Hakea, Yellow Hakea, Common Hakea, Tree Hakea	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
PTERIDACEAE	*Ceratopteris thalictroides*	Ceratopteris	No	No	No	No
PTERIDACEAE	*Cheilanthes caudata*	Cheilanthes	No	No	No	No
PTERIGYNANDRACEAE	Moss sp. Bush Blitz Groote1	Moss	No	No	No	No
RESTIONACEAE	*Dapsilanthus elatior*	Dapsilanthus	No	No	No	No
RHAMNACEAE	*Alphitonia excelsa*	Alphitonia, Soap Tree, Red Ash	No	No	No	No
RHIZOPHORACEAE	*Bruguiera gymnorhiza*	Bruguiera, Large-leaved Mangrove	No	No	No	No
RHIZOPHORACEAE	*Bruguiera sexangula*	Bruguiera, Northern Large-leaved Mangrove	No	No	Near Threatened	No
RHIZOPHORACEAE	*Carallia brachiata*	Carallia	No	No	No	No
RHIZOPHORACEAE	*Rhizophora stylosa*	Rhizophora, Stilt-root Mangrove	No	No	No	No
RUBIACEAE	*Gardenia schwarzii*	Gardenia, Native Gardenia, Wild Gardenia	No	No	No	No
RUBIACEAE	*Morinda citrifolia*	Morinda, Cheesefruit, Rotten Cheesefruit, Great Morinda	No	No	No	No
RUBIACEAE	*Oldenlandia galioides*	Oldenlandia	No	No	No	No
RUBIACEAE	*Oldenlandia mitrasacmoides* subsp. *nigricans*	Oldenlandia	No	No	Data Deficient	No
RUBIACEAE	*Spermacoce dolichosperma*	Spermacoce	No	No	No	No
RUBIACEAE	*Spermacoce elaiosoma*	Spermacoce	No	No	No	No
RUBIACEAE	*Spermacoce gilliesae*	Spermacoce	No	No	No	No
RUBIACEAE	*Spermacoce membranacea*	Spermacoce	No	No	No	No
RUBIACEAE	*Tarenna pentamera*	Tarenna	No	No	No	No
RUTACEAE	*Boronia lanceolata*	Boronia	No	No	No	No
RUTACEAE	*Boronia lanuginosa*	Boronia	No	No	No	No
SANTALACEAE	*Anthobolus filifolius*	Anthobolus	No	No	No	No
SANTALACEAE	*Exocarpos latifolius*	Exocarpos, Native Cherry	No	No	No	No
SANTALACEAE	*Santalum album*	Santalum, Sandalwood	No	No	No	No
SANTALACEAE	*Santalum lanceolatum*	Santalum, Sandalwood, Plumbush, Wild Plum, Plumwood, Northern	No	No	No	No
SAPINDACEAE	*Dodonaea arnhemica*	Distichostemon	No	No	No	No
SAPINDACEAE	*Dodonaea lanceolata*	Dodonaea, Hopbush, Yellow Hop-bush	No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State / Territory Act)	Exotic/ pest
SELAGINELLACEAE	*Selaginella ciliaris*	Selaginella	No	No	No	No
SMILACACEAE	*Smilax australis*	Smilax	No	No	No	No
STYLIDIACEAE	*Stylidium dunlopianum*	Stylidium	No	No	No	No
STYLIDIACEAE	*Stylidium floodii*	Stylidium	No	No	No	No
STYLIDIACEAE	*Stylidium floribundum*	Stylidium	No	No	No	No
STYLIDIACEAE	*Stylidium muscicola*	Stylidium	No	No	No	No
STYLIDIACEAE	*Stylidium osculum*	Stylidium	No	No	Near Threatened	No
STYLIDIACEAE	*Stylidium pedunculatum*	Stylidium	No	No	No	No
STYLIDIACEAE	*Stylidium rotundifolium*	Stylidium	No	No	No	No
STYLIDIACEAE	*Stylidium schizanthum*	Stylidium	No	No	No	No
STYLIDIACEAE	*Stylidium tenerum*	Stylidium	No	No	Data Deficient	No
VERBENACEAE	*Phyla nodiflora*	Phyla, Lippia	No	No	No	No
VIOLACEAE	*Afrohybanthus enneaspermus*	Hybanthus, Blue Spade Flower, Ladys Slipper	No	No	No	No
XYRIDACEAE	*Xyris complanata*	Xyris, Hatpins, Yellow Iris	No	No	No	No
XYRIDACEAE	*Xyris oligantha*	Xyris	No	No	No	No
XYRIDACEAE	*Xyris pauciflora*	Xyris	No	No	No	No
XYRIDACEAE	*Xyris pusilla*	Xyris	No	No	No	No